

SMOKE SIGNALS

For Radio Amateurs • By Radio Amateurs

Published Monthly Since 1969 • Our 30th Year

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Sparking Scouts' interest in Amateur Radio has merit

By Jay Kempinger, KA9NKA

Where do Amateur Radio operators come from? Where does that spark come from that causes interest in radio communications?

On March 20, we found the answers to those questions at the 1999 Boy Scout Radio Merit Badge Clinic. There, 40 young men gathered to earn a merit badge that focused on Amateur Radio. (The Boy Scout merit badge program makes it possible for scouts to experience a sampling from a myriad of different hobbies, career opportunities, and personal development subjects.)

It was almost a year ago that the West Allis Radio Amateur Club (W9FK), along with Boy Scout Troop 536 from Milwaukee, hosted Jamboree of the Air (JOTA). JOTA is an annual scouting event that brings hams and scouts together worldwide for an exciting weekend of communicating by ham radio. The enthusiasm that this event generated infused us with a desire to do even more.

That desire eventually led us to organize the Radio Merit Badge Clinic. Volunteers from the West Allis Radio Amateur Club, UW-Milwaukee, Troop 536, and the Milwaukee County Council of Boy Scouting assembled at the University of Wisconsin Milwaukee to host the event. Along with the required radio and electronic theory, scouts enjoyed a QSO with hams from around the Midwest. There was also one exciting contact with Europe. All of the Scouts walked away with their completed merit badge and a basic understanding of the workings of Amateur Radio.

Following the clinic, the West Allis hams kindly offered licensing classes to the scouts. The signup for that training was overwhelming! At the completion of those classes, 15 or more new hams will be added to the ranks of Amateur Radio.

Our thanks to the following people for helping to make our clinic such a great success: The University of Wisconsin -



Jay Kempinger, KA9NKA, welcomes the Scouts to the Merit Badge Clinic, as Jim White, WB9YCS (front left), listens.

Photo by Phil Gural/W9NAW

Milwaukee for the use of their superb facility; the Amateur Radio Society at UWM (WB9JBF) for the use of their station; John Bedore (WD9IUV), Ron Crown (KA9JCP), Phil Gural (W9NAW), Craig Kasseckert (KB9SLB), Glen Letts (N9NLO), Tom Liebe (KB9TZB), Tom Macon (K9BTQ), Fred Mikolajewski (KC9WW), Chris Reynolds (KC0ARF), Les Peterson (W9YCV), Wayne Schrubbe

(N9RXB), Tim Schulman (KB9HJN), Dave Shank (KA9WXN), Tina Smith (KB9TPA), Howard Smith (WA9AXQ), Lynn Tamblyn (K9KR), Jim White (WB9YCS), Jake Haugh, Patti Kempinger, Jayson Kempinger, Jody Rymaszewski, Fred Witty, John Van Dreese, Jenny Wrycza, David Wrycza, and Dennis Wrycza.

QSOs were completed with Ivy (KB9-QPM), Pat (KB9OCZ), Wayne (WD9-

FLJ), Reed (N9TVT), Paul (K9OT), Rick (W9RCW), and Jim (AD9X).

Another photo is on page 4. □

**Wisconsin radio amateurs
e-mail address list • See
page 7**

AES founder Terry J. Sterman, W9DIA, SK

Terry Sterman, W9DIA, the man who founded Amateur Electronic Supply as a teenager in the 1950s, has died. He was 60 and had been in ill health for several years. Press reports say Sterman, who lived alone, died March 30 following a fire in his Northwest Milwaukee home.

First licensed in 1953, Sterman got into the Amateur Radio business as a teenager working in his father's TV and electronics parts store, Harris Radio Corporation, in his home town of Fond du Lac, Wisconsin. He went on to have a substantial impact on the ham radio marketplace. He founded Amateur Electronic Supply in 1957, when he was just 18 and still attending Milwaukee School of Engineering and commuting weekends to work at his father's store.

Sterman had suffered from serious health problems since 1988, according to his long-time friend and associate Ray Grenier, K9KHW, who had worked with Sterman at AES from the early years. AES changed hands January 1, 1998. The new owner is Amateur Electronic Supply LLC, headed by Phil Majerus, a prominent Wisconsin businessman.

Survivors include Sterman's wife, Elin, as well as a daughter and a brother. Services were April 2.

- The ARRL Letter

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Edited by Kenneth A. Ebnetter, K9EN, 822 Wauona Trail, Portage, WI 53901 • kebnetter@palacenet.net

Swapfests

and Other Social Events

SATURDAY, MAY 1, 1999. The Ozaukee Radio Club will sponsor its twenty first Annual Cedarburg Swapfest at the Circle-B Recreation Center, Cedarburg, WI. Contact Joe Holly, ORC Swapfest Chairman, 1702 Holly Lane, Grafton, WI 53024. (414) 377-2137 or Skip Douglas at (414) 284-3271.

SUNDAY, MAY 2, 1999. The De Kalb Hamfest, Sandwich Fairgrounds, Sandwich, IL. Contact KARC, 420 E Garden St., DeKalb, IL 60115. <http://tbcnet.com/~jleonard/hamfest.htm>

SATURDAY, MAY 8, 1999. The Lakeshore Hamfest at Manitowoc County Expo, Manitowoc, WI. Contact: Red, N9GHE (920) 684-3733 or Fred, (920) 682-9312. ManCoRad Radio Club, PO Box 204, Manitowoc, WI 54221-0204.

FRIDAY-SATURDAY, JUNE 4-5, 1999 ARRL Hamboree 21 & Iowa state convention, South Sioux City NE. Contact: Mike Nickolaus, NF0N, 316 East 32nd St., South Sioux City, NE 68776. (402) 494-6070. e-mail nf0n@avalone.net

SUNDAY, JUNE 6, 1999. The Central Wisconsin Radio Amateurs Swapfest (Stevens Point area.) has been canceled. Amateur radio exams will be given on June 5. (see testpoint)

SUNDAY, JUNE 13, 1999. Six Meter Club of Chicago Hamfest, DuPage County Fairgrounds, Wheaton, IL. Contact: (708)-442-4961.

SATURDAY, JULY 10, 1999. South Milwaukee Amateur Radio Club Swapfest, American Legion Park, Shepard Avenue, South Milwaukee, WI. Contact South Milwaukee ARC, P.O. Box 102, South Milwaukee, WI 53172. (414) 762-3235.

SATURDAY, JULY 10, 1999. PHD ARA Hamfest, Kansas City, MO. Contact: (816) 436-0069. e-mail wa0clr@worldnet.att.net

SUNDAY, JULY 11, 1999. Kankakee Area Radio Society Hamfest, Will County Fairgrounds, Peotone, IL. Contact Billie Kerouac, KF9IF (815) 939-7548. <http://www.geocities.com/capecanaveral/hanger/5711>

SUNDAY, JULY 18, 1999. Fox River Radio League Hamfest, Sugar Grove, IL. Contact: <http://www.frrk.org/hamfest.html>

SUNDAY, JULY 25, 1999. Racine, WI. The Racine Megacycle Club, Amateur Radio & Computer Show. Contact: e-mail: w9udu@wi.net voice mail: (414) 552-6RMC web page: <http://www2.wi.net/~hamradio/>

SATURDAY, AUGUST 14, 1999. Circus City Swapfest, Baraboo, WI. Contact: Steve Schulze, N9UDO, (608) 356-2313/356-4777 or Bill Klinkner, N9KXX, (608) 643-6908/643-6453. e-mail: ssschulze@hamfest.html

SUNDAY, AUGUST 29, 1999. Woodstock Hamfest, McHenry County Fair grounds, Woodstock, IL. Contact: (708) 944-0500. e-mail TCRG@Quality-Enterprises.com

SATURDAY-SUNDAY, SEPTEMBER 18-19, 1999. Peoria Superfest, Exposition Gardens, Peoria, IL. Contact: (309) 692-FEST(3378) e-mail www.w9uvi.org

SATURDAY, SUNDAY, SEPTEMBER 25-26, 1999. RADIO EXPO 99, Lake County Fairgrounds, Grayslake, IL. Contact: (708) 457-0966. <http://www.chicagomfclub.org>

FRIDAY, OCTOBER 1, 1999. Racine Megacycle Club Amateur Radio & Computer Auction. Knights of Columbus Hall, 13249 Washington Ave., Racine WI. www2.wi.net/~hamradio/auction.html

SATURDAY, OCTOBER 30, 1999. HAMFEST Minnesota & Computer Expo. St. Paul, MN. contact: (612) 535-0637. <http://www.hamfestmn.org>

SATURDAY, JANUARY 8, 2000. 28th Midwinter Swapfest, Waukesha County Expo Center Forum, Waukesha, WI. Contact: WARAC Swapfest, PO Box 1072, Milwaukee, WI 53201, or call Phil, W9NAW (414) 425-3649.

SUNDAY, JANUARY 9, 2000. South Bend Hamfest, South Bend, IN. Contact: Michiana Valley Hamfest Association, 21970 Kern Road, South Bend 46614.

See also the back page and flyer ads for additional information on many of these events.

Let us know of your dates as soon as you know them. We will list them and perhaps help avoid conflicts with other events.

As a service to our readers, this section of Badger State Smoke Signals is available without charge to list your upcoming Swapfest, Hamfest, dinner, picnic, party or other event of interest to Radio Amateurs in Wisconsin and nearby areas. Send information on your event to Kenneth A. Ebnetter, K9EN, 822 Wauona Trail, Portage, WI 53901. In addition, space is available at attractive rates on our advertising pages. For information on rates and requirements for our advertising pages, please contact K9ZZ or K9EN.



CLUB MEETINGS

Due to space limitations, we cannot always carry the full listing of Wisconsin and area club meetings. Please see the September 1998 meetings column for the latest complete listing. The following changes have been reported to BSSS since that listing.

EAU CLAIRE AMATEUR RADIO CLUB
2nd Tuesday - 7:30 PM Eau Claire, Parks & Recreation, 1300 First Ave, Eau Claire, WI 54703. All hams and guests welcome. Wide area coverage repeater KB9RRA 146.910 Mhz. For more info: Jim Stutz, KG9MV 715-828-0108. kg9mv@ecol.net

WAUPACA AMATEUR RADIO CLUB
"CQ First Tue." - A social gathering and Dutch treat luncheon at the King's Table in King, WI, on Highway QQ just south of highways 10 and 54 on the west side of Waupaca. Gather at 11:00 - 11:30. Order at noon. Club business transacted.

"CQ Third Fri." A social gathering and Dutch treat dinner, semi-formal, "OM & XYL" at one of the better supper clubs in the area. Check Waupaca 147.390 nets at 8:00 a.m. or 8:50 p.m. for that month's meeting place.

QCWA - WISCONSIN CHAPTER #55
Contact Erwin Froelich, W9RZW, Treasurer, W3449 Badger Road, Pine River WI 54965. For information about meeting dates or joining QCWA Chapter #55. The Wisconsin Chapter holds Spring and Fall dinner meetings on the first Saturday of June and October.

RADIO AMATEURS OF WISCONSIN (R.A.W.) OSHKOSH, WI
R.A.W. is a family oriented club, in which most of it's activities revolve around family doings and outings. Meetings are on the 3rd saturday of each month at various locations. If you are a Ham or are interested in Ham radio, contact Mark Miller, N9WT, (920) 231-1662 or Jeff Oppermann N9OSB, (920) 233-7961. We are always looking for good people to join us.

Badger State Smoke Signals

Amateur Radio Education and Information

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EDITORIAL BOARD: Ken Ebnetter, K9EN; Dave Knaus, WA9POV; Don Evenson, K9JYX; Jim Romelfanger, K9ZZ.

Subscriptions

| | | |
|---------|---------------------------|---------|
| 1 year | (12 issues) | \$13.95 |
| 2 years | (24 issues - save \$1.95) | \$25.95 |
| 3 years | (36 issues - save \$3.90) | \$37.95 |

Subscription form is on page 5. Special club package reduced rates are available. For information, contact Ken Ebnetter, K9EN.

When to Send It

The closing date for each issue is the first of the month for the next month's issue. For example, the closing date for the June issue is May 1. The only exception is for participating clubs' minutes. Participating clubs are requested to send their material no later than FIVE DAYS after the club's meeting. For example, if a club meets on the 4th of the month, the material should be sent no later than

the 9th of that month. This material is to be sent to the Editor.

Where to Send It

Address changes and corrections, and exchange papers should be sent to Ken Ebnetter.

Editorial material, photographs, and feature articles should be sent to Jim Romelfanger.

Inquiries about advertising should be directed to Ken Ebnetter. Club, swapfest, and Test Point information should be sent to Ken Ebnetter.

Swapfest ADS should be sent to Jim Romelfanger NO LATER THAN EIGHT WEEKS BEFORE THE EVENT'S DATE.

Subscriptions should be sent, with check or money order, to Ken Ebnetter.

Conditions for Reprinting or BBS Posting Material from Badger State Smoke Signals

Permission is hereby granted to reprint articles or posting articles on radio or telephone bulletin boards from *Badger State Smoke Signals*, providing credit is given to the original author, publication in which the article first appeared, and to *Badger State Smoke Signals*. THIS CREDIT IS MANDATORY, AND NO MATERIAL MAY BE PRINTED OR POSTED UNLESS IT IS GIVEN.

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Badger State Smoke Signals is incorporated as a Wisconsin non-stock, non-for-profit organization.

Editorial Disclaimer

The opinions expressed in editorials, guest editorials, columns, articles, and letters from readers are the opinions of the authors only, and do not, unless otherwise stated, express or imply endorsement by *Badger State Smoke Signals*, or by any other individual or organization.

The Test Point



Amateur Radio Examination Locations and Schedules in the Wisconsin Area

| | |
|--------------|--------------------|
| May 01, 1999 | Pewaukee, WI |
| May 01, 1999 | Oshkosh (Omro), WI |
| May 01, 1999 | Racine, WI |
| May 01, 1999 | St. Paul, MN |
| May 08, 1999 | Blaine, MN |
| May 08, 1999 | Madison, WI |
| May 08, 1999 | Onalaska, WI |
| May 13, 1999 | Apple Valley, MN |
| May 15, 1999 | Cottage Grove, MN |
| May 15, 1999 | Loves Park, IL |

May 15, 1999 Milwaukee, WI (BE)
 May 15, 1999 Sheboygan, WI
 May 18, 1999 Eden Prairie, MN
 May 22, 1999 Bloomington, MN
 May 22, 1999 Oshkosh, WI (R.A.W.)
 May 29, 1999 Milwaukee, WI (MRAC)
 May 29, 1999 Tomahawk, WI
 June 05, 1999 Oshkosh (Omro), WI
 June 05, 1999 St. Paul, MN
 June 05, 1999 Stevens Point, WI
 June 10, 1999 Apple Valley, MN
 June 12, 1999 Blaine, MN
 June 12, 1999 Madison, WI
 June 15, 1999 Eden Prairie, MN
 June 16, 1999 Bloomington, MN
 June 19, 1999 Cottage Grove, MN
 June 19, 1999 Loves Park, IL
 June 19, 1999 Milwaukee, WI (BE)
 June 26, 1999 Milwaukee, WI (MRAC)
 June 26, 1999 Tomahawk, WI
 July 03, 1999 Oshkosh (Omro), WI
 July 03, 1999 Racine, WI
 July 03, 1999 St. Paul, MN
 July 08, 1999 Apple Valley, MN
 July 10, 1999 Blaine, MN
 July 10, 1999 Eau Claire, WI
 July 10, 1999 Madison, WI
 July 13, 1999 Eden Prairie, MN
 July 17, 1999 Cottage Grove, MN
 July 17, 1999 Loves Park, IL
 July 17, 1999 Milwaukee, WI (BE)
 July 20, 1999 Sheboygan, WI
 July 24, 1999 Bloomington, MN
 July 31, 1999 Milwaukee, WI (MRAC)
 July 31, 1999 Tomahawk, WI
 August 07, 1999 Oshkosh (Omro), WI
 August 07, 1999 Racine, WI
 August 07, 1999 St. Paul, MN
 August 12, 1999 Apple Valley, MN
 August 14, 1999 Blaine, MN
 August 14, 1999 Madison, WI
 August 17, 1999 Eden Prairie, MN
 August 21, 1999 Cottage Grove, MN
 August 21, 1999 Loves Park, IL
 August 21, 1999 Milwaukee, WI (BE)
 August 21, 1999 Oshkosh, WI (R.A.W.)
 August 28, 1999 Bloomington, MN
 August 28, 1999 Milwaukee, WI (MRAC)
 August 28, 1999 Tomahawk, WI
 September 11, 1999 Sheboygan, WI
 September 11, 1999 Onalaska, WI
 October 16, 1999 Oshkosh, WI (R.A.W.)
 November 06, 1999 Menomonie, WI
 November 06, 1999 Onalaska, WI
 November 16, 1999 Sheboygan, WI
 December 18, 1999 Oshkosh, WI (R.A.W.)
 Monthly, 1st Sat. Racine, WI
 (except January, July & August)
 Monthly, 1st Sat. Oshkosh (Omro), WI
 Monthly, 1st Sat. St. Paul, MN
 Monthly, 2nd Thu. Apple Valley, MN
 Monthly, 2nd Sat. Madison, WI
 Monthly, 2nd Sat. Blaine, MN
 Monthly, 3rd Tue. Eden Prairie, MN
 Monthly, 3rd Sat. Milwaukee, WI (BE)
 Monthly, 3rd Sat. Loves Park, IL
 Monthly, 3rd Sat. Cottage Grove, MN
 Monthly, 4th Sat. Bloomington, MN
 Monthly, Last Sat. Milwaukee, WI (MRAC)
 (except December)
 Monthly, Last Sat. Tomahawk, WI
 (January thru October only)
 Quarterly Eau Claire, WI
 (Second Saturday Jan., Apr., & Oct.)
 plus annual summer hamfest.)

Many Swapfests/Hamfests offer exam sessions. If not shown above contact the sponsoring club in the Swapfest column on page 2.

The FCC now requires applicants to show their ORIGINAL AMATEUR LICENSE to the VEC. A copy of your license must be attached to your FCC form 610. You will also be required to have a photo ID, or other acceptable identification.

GENERAL RULES

FOR MOST EXAMINATIONS:

Be sure to check with sponsors in the event there are changes and/or errors in the dates or information given.

Some examinations require filing an FCC Form 610 and advance registration at least 30 days before the exam date. (Some VECs permit walk-ins. Check with sponsor.)

To register, you must first secure a copy of the current FCC Form 610 and fill it out completely (AND CORRECTLY). Get your form from an FCC Field Office, the ARRL. Send a 32c/ SASE if you request one from the ARRL. In most cases, forms can also be obtained from the sponsoring group.

ARRL/VEC examinations require a check for \$6.45 payable to "ARRL/VEC".

The FCC now requires applicants to show their ORIGINAL AMATEUR LICENSE or CSCE to the VEC. You must also have two good copies of your license or CSCE. A copy of your license or CSCE must be attached to your FCC form 610 and most VEC want a copy for their records. You

will also be required to have a photo ID, or other acceptable identification.

Technician class licensees must show proof of testing before March 21, 1987, in order to upgrade to General with a code test only.

Additional information is given below.

For those with internet access, a listing of exam sessions is available from:

<http://www.arrl.org/arrlvec/examsearch.phtml>

By checking this page, a person can find out registered VE sessions anywhere in US and some overseas. You can search by country, state or zip code. The listing is not specific to any particular VEC, it is a master database. (Thanks to KB9EQI for information.)

MILWAUKEE RADIO AMATEURS' CLUB (MRAC/VEC)

LAST SATURDAY - MILWAUKEE, WI

LAST SATURDAY DATES: (except December): 9:00 a.m. to 12:00 noon at Amateur Electronic Supply (AES), 5710 W. Good Hope Rd., Milwaukee, WI. Note: For Additional Information: Call (414) 797-MRAC (Answering Machine). or (414) 797-6722.

Bring along your ORIGINAL license, CSCE (if any) and one (1) good quality photocopy of each, plus two forms of identification, such a driver's license, etc. Also required is \$6.40 for the exam fee. WALK-INS are welcome. To register in advance, use a post card: Print the grade of license you are applying for, your name, address, and telephone number. Send the card to MRAC/VEC, Milwaukee Radio Amateurs Club, PO Box 25707, Milwaukee, WI 53225.

BADGER EXAMINERS (BE) - MILWAUKEE

Badger Examiners group tests at AES (Amateur Electronic Supply) at 60th and Good Hope, every third Saturday MORNING. Exam times are 9:30 a.m. to 12:00 noon, at the old Sterman Printing shop, just 300 feet west of the AES store. Novice to Extra are offered, and all test materials are provided. Fee is \$6.35, and bring your original license, or CSCE if needed. Also available are Commercial license exams GROL (General Radiotelephone license), GMDSS, Telegraph, Etc. Fee is \$35.00. For more information call Gary Sharbuno, WI9M at (414) 355-0237.

MADISON, WI

VE exams are held in Madison every second Saturday morning of the month at 8 a.m. They are held at the operations building of the Madison Metropolitan Sewerage District at 1610 Moorland Rd. To get there take the Beltline (Hwy 12 & 18) to South Towne Drive. Go south 8/10 mile till South Towne Drive makes a bend and becomes Moorland Rd. and enter at gate.

You should bring a picture ID, your original licence and a copy of your licence. For exams beyond the novice tests, bring a check for \$6.35, made out to the ARRL/VEC. If the special 610 form with the medical exemption is required, contact me beforehand to obtain one. No appointments are necessary to take exams. For further questions, please leave a message on the mailbox or phone me at (608) 832-6631. Mark Jenks, NZ9B

STEVENS POINT, WI

ARRL Exams in Stevens Point, Time: 0930. Place: A107 Science Building, on campus at UWSP (corner of Fourth and Reserve streets) For more information contact Joe Larson, N9JW, at 715- 344-1182 evenings or email to joel8@bigfoot.com.

RACINE, WISCONSIN - ARRL/VEC

Monthly - first Saturday, except January, July, and August.

Monthly exams are given 9:00 to 11:00 a.m. at the Red Cross Building, 4521 Taylor Avenue, Racine. Walk-ins are permitted.

Talk in on 147.87/ .27. Inquiries and registrations should be directed to Robert N. Jensen, W0WLN, 5616 Cambridge lane #6, Racine, WI. Telephone (414) 886-8551.

TOMAHAWK, WI

Last Saturday of every month. Jan. thru Oct.

Tomahawk Volunteer Examiners (ARRL/VEC). Tomahawk, WI. No preregistration required, but appointment would be appreciated. Registration at 8:30 a.m. and testings starts at 9:00 a.m. For location or other information, inquire on 145.43 MHz. repeater or contact: Terry Collins, KB9AUP, W6564 Highway 8, Tomahawk, WI 54487. Telephone (715) 453-4633.

APPLETON, WI - ARRL/VEC

MANITOWOC, WI (HAMFEST)

KAUKAUNA, WI (HAMFEST)

Conducted by the Fox Cities ARC VE team. All test sessions in Appleton are held at James Madison Jr. High, 2020 S. Carpenter Street. Testing starting at 8 a.m. For Appleton information, contact George R. Croy, W9MDP, 2113 Twin Willows Drive, Appleton, WI 54914. (920) 730-0967. For Manitowoc or Kaukauna information, contact Larry Siebers, KD9IA (920) 759-1167.

OSHKOSH (OMRO)

The Oshkosh VE Team will administer Amateur Radio exams monthly on the first Saturday. Registration begins at 8:30 a.m. and exams will be given from 9 a.m. until noon at the Omro Community Center, 130 W. Larrabee, Omro, WI. Walk-ins welcomed. Bring a good quality photocopy of your original license and any other necessary documents such as a CSCE, etc. The first session will be through W5YI/VEC, and then sessions will alternate between ARRL/VEC and

W5YI/VEC. The exam fee is \$6.35. For more information, please call Dick Lemme, K9FA, at (920) 235-0987, e-mail lemme@vbe.com, or write Dick at 826 Jefferson Street, Oshkosh, WI 54901.

OSHKOSH, WI (R.A.W.) - (W5YI/VEC)

February 20, 1999, May 22, 1999, August 21, 1999, October 16, 1999, December 18, 1999. Sponsored by Radio Amateurs of Wisconsin (R.A.W.) Testing sessions at UW Oshkosh, College of Nursing Building, 845 Algoma Blvd., Room 211, Oshkosh, WI. Park free in lot 29 on side of building or in lot 25 behind the building. Registration start at 9 a.m. \$6.35 per test. Bring 2 forms of id etc. Walk-ins are welcome. Contact: Mark Miller, N9WT, (920) 231- 1662 or Mike O'Conner, K9II (920) 231-7093.

EAUCLAIRE, WI

The Eau Claire ARC will hold exam sessions on the second Saturday in the months of January, April, and October, as well as on the date of their annual hamfest during the summer. For more info: Steve Bluem KA9OMY 715-839-6509

SHEBOYGAN, WI

All sessions will be held in the Red Cross building, 2023 Erie Avenue, Sheboygan, WI, in the SCARC meeting room on the lower level of the building. This area is not readily handicapped accessible. In the event there is a candidate who would be affected by this situation, we will accommodate that person in one of the Red Cross conference rooms on the main level of the building which IS handicapped accessible. Pre-registration is necessary (we don't want get caught sort!) Contact: Art Pahr, K9XJ, N8209 Willow Road, Plymouth, WI 53073-2929. (920) 876-2370. e-mail <k9xj@excel.net>

ONALASKA, WI (ARRL/VEC)

The Riverland Amateur Radio Club will hold test sessions at the Onalaska Public Library, 741 Oak Avenue South. registration begins at 9:00 a.m. Please bring two forms of identification and two copies of all original documents, CSCEs, license, etc. For more information contact: Roger Reader, KA9BKK, 526 13th Ave. N., Onalaska, WI 54650. (608) 783-0723

MEDFORD, WI (ARRL/VEC)

Taylor County Area AREC. Registration starts 8:30 a.m., testing starts 9:00 a.m. Location: The conference room in the lower level of the Sheriff's annex to the Taylor County Courthouse, corner of 2nd and Ogden Sts., Medford, WI. Take Ogden St. west off of Hwy. 13 to the courthouse. Park in the lots on the east or south sides of the courthouse or on the street. PLEASE use the entrance on the south side of the courthouse and watch of the signs. Walk-ins welcome. Contact: Tom Hrdina, N9GEN, 2373 Willow Ave., Medford, WI 54451. (715) 748-4054

PEWAUKEE, WI

The location is a little more handicap accessible, room S112 in the back of the science building by the handicap parking entrance. WCTC is on Hwy JJ off Hwy 16 from the East I-94 and Hwy T from West I-94 just north of GE Medical Systems. Tests start at 9:00 AM and registration ends at 10:00 AM. Contact: Al Johnson, AA7CS, (414) 568-0836; Roger Bradley, AA9OJ, (414) 691-3089 or SEWFARS Repeater club c/o Jam Lazachek, KF9GG (414) 650-0724.

HUDSON, WI (ARRL/VEC)

Sponsor: St. Croix Valley AR Testing Col. Time: Call for time and walk-in info, Contact: Gregory Miller (715) 386-9857

Location: St. Croix County Emergency, Government Center by jail, Carmichael Rd. lower level, Hudson, WI 54016. (Information tnx ARRL Web site)

FRIENDSHIP, WI (ARRL/VEC)

Sponsor: Adams County ARC. Location: Adams-Columbia electric Cooperative (Community Room), 410 E. Lake St., Friendship, WI 53934. Contact: Karl Simonson, KB9EQI, (608) 565-6533. kb9eqi@iname.com

CEDARBURG, WI - ORC HAMFEST

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KAUKAUNA, WI - SWAPFEST

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WAUKESHA, WI - MIDWINTER SWAPFEST

DUBUQUE, IA - HAMFEST

See the Swapfest column for additional information and contact persons.

DUBUQUE, IA - ARRL/VEC

Dubuque Hamfest. Contact: Carl Clark, NOKAX, 2145 Delicia Drive, Dubuque, IA 52001. (319) 557-9149.

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Northern Illinois Volunteer Examiners (W5YI VEC). Held at North Suburban District Library, 6340 North Second St. (Hwy. 251), Loves Park, IL. 9:00 a.m. to noon. No new applicants after 11:00 a.m. Walk-ins welcome. Contact: Rusty Cordell, WB9QYV, 1823 Hulin St., Rockford, IL 61102-2619. (815) 968-0080. e-mail WB9QYV@aol.com

The Automatic Packet Reporting System (APRS)

By Tom Weeden, WJ9H

#3 - Digipeaters and Messages

If you read the April issue of BSSS, you may have seen a short news article about how a Pennsylvania ham made an emergency call using APRS when other communications methods did not work. KC5JGV used a Mic-Encoder, which connects between the microphone and an FM rig to insert a short APRS position and status packet at the end of a voice transmission. KC5JGV's packet alerted several hams to the emergency, who were able to direct the Pennsylvania State Police to the site of the accident. The inner workings of the "Mic-E" is beyond the scope of this month's article, but I wanted to emphasize some of the interesting possibilities of APRS.

Last month, I told you the current version of APRS was v8.30. Bob Bruninga, WB4APR, has been through several revisions and is now up to version 8.38! The latest version is always available for download at the TAPR web site: www.tapr.org. This month we will discuss the use of digipeaters in more detail.

Packet radio in its infancy made broad use of digipeaters to link connected stations together. A digipeater would retransmit a packet if its callsign were part of the path of the originating station. Digis did no error checking, which meant that a corrupted packet could be propagated all the way to the far station, which would then send a request for retransmission. These retries tended to clutter up the frequency. Digipeaters were slowly replaced by networked nodes, which would forward a packet to its destination only after it acknowledged the packet it received. Nodes increased the throughput on the packet frequency to the point where if a station did use a digipeater to connect to someone, it was considered poor operating practice.

APRS is considered a broadcast protocol, where many stations are intended to receive the packet of the sending station. It is impractical to acknowledge all the receipts of a packet at each station, so only <UI> packets are sent.

In order to increase distances beyond simplex range, digipeaters are used. APRS uses generic aliases for digis, the most frequently used being RELAY and WIDE. By default, the APRS software gives each home station an alias of RELAY. A wide-area digipeater usually has an alias of WIDE. If you have begun using APRS, you will notice that the packets sent by your station have an UNPROTO path of VIA RELAY,WIDE. This will allow any nearby home stations to retransmit your packet to get it to a WIDE digipeater for wide-area coverage. (Some WIDEs also have a second alias of RELAY to catch all packets.) Generic aliases are useful for new stations and especially mobiles who are new to an area and have no prior knowledge of the area's available digipeaters.

After you have been receiving packets for awhile, you can press the D key to see the digipeater paths of stations. Using the U (unproto) command, you can modify your path to take advantage of nearby stations. For instance, in the Milwaukee area, there are several wide-area digipeaters on the air on 144.39 MHz. Since all of them have an alias of WIDE, any (and possibly ALL) of them will retransmit your packet with WIDE in its path. To avoid duplication of packets, you can use the U command to put the actual callsign of one of the digipeaters in your path to replace the generic WIDE alias.

You can experiment with multiple digipeaters, such as VIA WIDE,WIDE to get out two digipeaters in all

directions. But don't overdo it. Three WIDEs in a row has the potential to generate 27 duplicate packets as each digipeater ping-pongs your message to each other. It is always better to specify the callsign in a path if you know it.

You can find more information on digipeaters in APRS by pressing F1 - F to get a list of help files, then entering DIGIS.TXT and pressing ENTER.

The other topic for this month is sending messages. APRS gives you the ability to send short, one-line messages to a specific station, or short text bulletins to all stations on the frequency. Simply press S (Send). You'll be prompted for the call of the station you want to send to. Next you'll be prompted for a line of text. After entering the text, you'll see the timer window in the upper right hand corner show a new countdown until your next message packet is sent. APRS will continue sending the packet at increasing intervals until the receiving station sends back an acknowledgment packet. (Note that you are still sending <UI> packets and are not actually connected to the other station. The acknowledgment is part of the APRS unconnected protocol. The receiving station must also be running APRS for the ACK to be generated.)

If you don't have a good path to the other station, you can erase the outbound message by pressing E (Erase) and the line number of the message if you sent more than one line of text. If incoming messages are received, you can use the K (Kill) command to erase them as needed.

To send bulletins, use BLN1 as the To: address for the first line, then BLN2, and so on. If your station hears a bulletin packet, a prompt will appear at the top of your screen to press B to see new bulletins. Bulletins are useful to announce meetings, or significant weather events, such as snowfall totals.

Finally, you can see a list of all messages sent, whether or not they were addressed to you, by pressing T (Traffic). You'll see the calls of the sending and receiving stations, plus their lines of text. Interspersed in the traffic are "time-ticks" to show the approximate time of receipt.

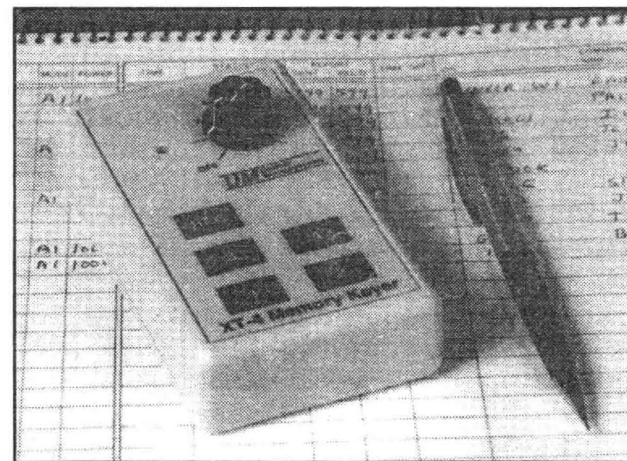
APRS is shareware, and it can be run indefinitely without paying the registration fee. However, as you begin to customize APRS for your personal tastes, like unproto paths and preferred map views, you will notice that you need to re-enter all your parameters each time you run the software. When you register your software with the author, WB4APR, you then get the ability to save your settings. For more information on registration, press V (Validate).

In future months, we'll discuss setting up home weather stations and mobile GPS trackers.

For now, let me put out a request for area APRS users who have self-contained GPS trackers. Dane County ARES will be providing communications for the Madison Marathon on Sunday, May 30th, 1999. We will have an APRS display running in the communications tent, and are hoping to place 12 trackers in buses and in the vehicles preceding the lead male and female runners. If you'd like to help us out, please contact me at wj9h@arrl.net. If you're in southern Wisconsin, tune us in on 144.39 to see the action!

NEW PRODUCTS

XT-4 CW Memory Keyer



Unified Microsystems is proud to introduce its newest product, the XT-4 CW Memory Keyer. Its small size and battery operation make it perfect for Field Day, DXpeditions, QRP, or any portable or mobile operation.

The XT-4 is fully iambic with self-completing characters. Each of the four memories hold approximately 100 - 110 Morse characters in non-volatile storage. Memories 1 - 2 and 3 - 4 can be chained together for even longer messages.

A knob gives smooth speed control (8 - 45 WPM) as opposed to clumsy up/down buttons or complex codes that other keyers use. A paddle reverse function switches the dit and dah keys around for operators who send with the other hand. The tune function simplifies adjusting your rig or amplifier.

Although the XT-4 will run for several hundred hours of heavy use on a single 9V battery, an automatic power down feature kicks in after 30 minutes of inactivity to further lengthen battery life.

The list price is \$79.95. An optional cable set with cables to the paddle and rig are available for \$9.95. The XT-4 is available directly from Unified Microsystems and from selected dealers.

Visit our Web page (www.qth.com/w9xt) or write for a catalog for more information about the XT-4 and other radio products.

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WANTED: Manual and schematic for a Drake TR-4C and the power supply. Please call (414) 679-9130 or Email: rkrogers@execpc.com. Thanks for any help. Ken Rogers, W9NUE.

WANTED: DC power cable (or just the connector) for Kenwood TS-520S. Jim Romelfanger, K9ZZ, 412 1/2 Ash Street, Baraboo WI 53913-2501. (608) 356-4031. E-mail: smokesigs@baraboo.com

National Weather Service LaCrosse open house

The National Weather Service in La Crosse will be hosting another open house on Thursday, May 20th from 2 - 7 p.m.

- Todd Shea

MERIT BADGE CLINIC: HAM GEAR EXPLAINED



Dave Shank, KA9WXN, describes the equipment at the University of Wisconsin/Milwaukee to a group of Scouts.
Photo by Phil Gural/W9NAW



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19" RACK MOUNT

By Richard Regent, K9GDF

Using the internet to rediscover Amateur Radio acquaintances really works. (Please read my QRZ.COM article in the March, 1999, Badger State Smoke Signals). For a search, I try to find Phil Goetz, KN9ELT, who I remember lived in Madison in 1956. Searching QRZ.COM by calls and last name is easy. I enter K9ELT and find that Karen Walker now holds that call (Phil later told me Karen is his wife). Then I make a name search resulting in a short list of amateurs. I recognize that the call N6ZZ could be Phil, we worked each other in contests over the years! Finally, I simply click on his e-mail link and type a note to Phil. It's just that quick. Give QRZ.COM a try yourself.

Phil replies via e-mail, "After a 27-year career with an insurance company, I got laid off a couple of years ago. My wife and I drove through southern New Mexico, fell in love with the area, and bought 10 acres in the mountains. We've completed building a very comfortable house and are in the process of finishing off the inside with paint, wallpaper, tile and trim. No antennas in place yet, but that should come in a few months. Got the base for the tower poured, guy points in place, and 50 feet of Rohn 45 ready to go up. At 7,200 feet with a 270 degree view, it should play pretty well."

You'll enjoy the following 42-year old memories tips of Phil Goetz, especially if you are an old timer, active in contests, or remember him as K9ELT, W6DQX or N6ZZ.

KN9ELT and I met handling traffic on the 40-meter CW Midwest Novice Net in 1956. One day Phil said during a QSO with me, "We're going to be in Milwaukee to upgrade to General." On FCC exam day (held every three months) we find each other on the seventh floor just outside a room where exams are being given in the old Federal Building on Wisconsin Avenue in Milwaukee. Phil's parents drove 85 miles from Madison to Milwaukee to get Phil there. I only had to take the bus that stops on the corner near my house on Milwaukee's south side. Phil and I, just becoming teenagers, are too young to have automobile driver's licenses.

We concentrate on passing the FCC General License exam. Soon, the FCC examiner has results to report to Phil, "You did not pass the written test." I was sorry that Phil came all that distance without success, but Phil says confidently, "I'll try to convince my parents to drive to the Chicago exams some time soon to try again." Although we didn't know it at the time, both of us play clarinet as a musical sideline.

Now the part about contesting. Phil travels overseas twice a year to operate the CQ World Wide phone and CW contests from different zones. His objective is to operate CQ contests from each of the 40 zones. He's operated from 29 zones so far:

- 1 KL7Y
- 2 VE2/N6ZZ
- 3 W6RW
- 4 W9EWC, W9YT
- 6 XE2MX, XE2SI
- 7 TI2C
- 8 VP2VCW, VP2VEQ, KP2A
- 9 PZ5JR
- 10 HC8DX, HC5Z
- 11 ZW5B
- 12 CE0Y
- 13 LU4FM
- 14 CT4NH
- 20 JY7Z, 5B4TI
- 22 4S7/N6ZZ
- 23 JT1Z
- 24 XX9X
- 26 HS1AZ
- 28 P29AS
- 29 VK6BAT
- 30 VK9LI
- 31 KH6RS
- 32 5W1JJ
- 33 EA9LZ
- 34 SU1RR
- 36 3C5A
- 37 7Q7TT
- 38 3DA0Z
- 39 3B8/N6ZZ

In 1965 I asked Phil to share some basic contest guidelines with me. He mailed me an informative letter describing many helpful tips that still apply today. Let's have Phil tell them:

"Location is extremely important. I've been fortunate enough to operate at W9YT, W9EWC, W6RW and observe doings from W6YY, W6AM and W6VSS. All of these stations have clear shots to most directions.

Antennas - W9YT doesn't do badly with their setup. W9EWC (silent key now) is much better, however, due to the 6-element 20-meter beam, the two elements on 40 and

the 80-meter vertical. W6AM's (also silent key) rhombic antennas are simply fantastic. If I had room and money, that's what I'd try to set up. I think he has 12 rhombics, and he can switch from Asia to Africa in an instant. No waiting for the beam to turn from Asia to Africa, and they are as sharp. He can tell from signal strength what part of Europe a particular signal is coming from.

Equipment - If you want to run 1 kw, the commercial gear is probably the best bet, if you can afford it. W9EWC's KW-1 is very effective on CW, and his S-line is nice on SSB. For CW, I prefer the 75A-4 to anything else, including the new Squires-Saunders receiver. W9SZR (now K3ZO) introduced me to high-fidelity headphones. You can get a pair for \$25 or so and they are pretty nice for long periods of operation. I think you can separate stations out of the QRM with them more easily.

CQ and listen - I use a keyer. I send right handed and write left handed. This enables log keeping to be done at the same time as sending. Since it has been my fortune to operate well-endowed stations, I can rely on CQs to get a good many replies. By that method, I use the time involved in signing with one station and calling the next CQ to finish up on the logging and make an entry on the check sheet. However, if business is good, like at the beginning of a contest, the check sheet takes a back seat. It's a matter of judgement to figure out when it is time to stop calling CQ, to figure out when it is time to QSY, and whether it might be wiser to pick a different frequency to call CQ on, or to reply to some other CQing contesters. I don't have any hard and fast rules to follow. When operating a powerful, well heard station, it is difficult to make a graceful QST to call CQ move. During contest operation, there just aren't enough holes in the band, and when you fire up the rock crusher on a new frequency to call CQ, you're probably stamping on somebody's toes. It's a touchy situation.

Preparation - If I am too eager in anticipating a contest, I may find myself keyed up too early and not sleeping the night before. It is important to get yourself up for a contest, but I try to avoid getting too involved with the contest until starting day arrives. As for the rig, I suppose it would be prudent to make sure that it works on all the bands that you are intend to use. At W9EWC, I always made up a tuning chart to facilitate band changes, we had one at W9YT too. W6RW will sometimes check the tubes in his receivers before a DX contest, replacing the weak ones. You might take the trouble to check the solder joints in antenna connections and it's always nice to have a spare rig available.

Station particulars - I got my first taste of multi-operator work out here at W6RW. Two operators, two receivers, two exciters and one final. The guy that hits the foot switch first gets the rig. Makes for an interesting operation. Equipment arrangements on CW from left to right, transmitter, receiver, keyer. I sit in front of the receiver, can use the keyer with my right hand, can zero the transmitter at the same time with left hand and use a foot switch for transmitting. I'm just most comfortable with that particular setup. It's very seldom that I can sit down at somebody's station and be comfortable and it isn't really proper to start rearranging some guy's equipment.

AM phone - AM phone is on the way out, at least as far as the serious contestee is concerned. There's probably more activity on CW, whereas you might find yourself with no new stations to work on phone, but in either variety of contest there is a certain element of skill involved. You can work 50 stations in the Wisconsin QSO Party, tune the band and find nobody new. Yet W9RQM is working number 85 and still going strong. Strange!

Phil's contest tips and thoughts during the vacuum-tube era are still fundamentals of common sense operating. It is great to get in touch with Phil, maybe we'll work N6ZZ with his mountain top antenna in a contest.

Out to Launch

Bryan Suets, W8BWKN

The annual Midwest Rockets for Schools event weekend will take place May 14 and 15, 1999 on the shores of Lake Michigan in Sheboygan, Wisconsin.

The event features many high power model rockets built and launched by High School teams from around the midwest on Saturday, May 15 (rain date May 16). These rockets go approximately 1 mile high and many include amateur radio payloads, including audio telemetry on 2m and/or 440 MHz, and a few include ATV in the 440 band.

The centerpiece is the launch of a Super-Loki sounding rocket which carries a payload to an altitude of approximately 35 miles. The Super Loki payload this year is being designed and constructed by a team of students from Michigan Technological University. The goal this year is to obtain critical launch data during the ascent. Telemetry signals will be sent using FM in the 440 MHz band. For more information, check out the Web site:

<http://www.phy.mtu.edu/rocket>

WISCONSIN DEM, RED CROSS TO TEST Y2K PREP ON FIELD DAY

In order to test the capability of the Wisconsin Emergency Management hamshack in Madison to maintain communications to the 72 counties in Wisconsin during Y2K and any other type of emergency, Dane County ARES/RACES hams will be conducting a drill on June 26, 1999 during Field Day. The Badger Chapter of the American Red Cross hamshack in Madison will also be participating and taking check-ins from other WI Red Cross Chapter hamshacks on HF and VHF Packet. The heir callsign on HF will be WA9ACI on 3.993.5 MHz LSB and on VHF packet W9JZ on 145.610 MHz. The drill will start at 7 PM and end at 9 PM CDT.

The WEM hamshack callsign is WC9AAG. Frameable WEM QSL certificates will sent to WI participants at no cost.

Frequencies:

HF Phone: Primary 3.993.5 MHz LSB; Alternate: 7.277 MHz LSB
HF Pactor: 3.584 MHz USB
VHF Packet on the AR node frequency: 145.610 MHz
VHF Phone: CWRA Baraboo Repeater 146.880 MHz
MARA Madison Repeater 147.150 MHz
UHF Phone: UHF Backbone Network and the Southern Wisconsin Repeater Group (443.400/443.675/53.090).

The WEM hamshack telephone number is: 1-608-242-3323. E-mail: races@dma.state.wi.us. Mail QSL cards to: Wisconsin Emergency Management, ATTN: Radio Room, Post Office Box 7865, Madison, WI 53707-7865

Thanks for your help.

73, Mack, N9NTB

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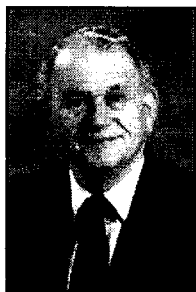
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MAY 1999

The Computer Corner

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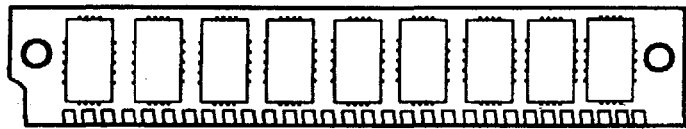


No. 66: Memory 2 - The "Sticks"

SIMM, DIMM, Fast Page Mode DRAM, EDO RAM, Burst EDO, SDRAM, RDRAM. What a bunch of alphabet soup! What do they all mean? What are they for? What do they look like? Here we go with a continuation of last month's discourse.

Let us begin with the physical aspects of memory, especially the SIMMs and DIMMs, alias memory "sticks".

Back in the old XT and early AT days, you added memory to a motherboard by plugging in individual chips, typically little 14-pin guys or DIPs. Typically, a computer with one megabyte of memory (640 kb of "DOS" or conventional memory) used 4 rows of these chips, each row containing nine chips, for a total of 36. A row of 9 chips was called a "bank" of memory. Motherboards were really large back then. They had to be to hold enough sockets for all four banks of chips! Later, Single Inline Memory Modules (SIMMs) were invented. As shown here



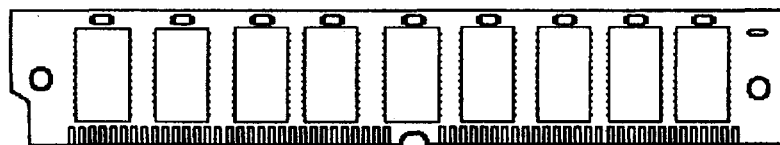
(a 30-pin, 256kb module, 3 1/2 inches long), these were actually little circuit boards designed to plug into the motherboard. Each SIMM typically carried 9 DIP chips soldered to them, although there were models with 8 chips (non-parity) and later, others with only three. Surface mount technology allowed DIP packages to be made smaller than the old style that plugged directly into the motherboard, so the SIMMs took less space in their sockets, thus saving even more space on the motherboard. The majority of motherboards carried four sockets (though many carried eight, and I once had one that carried 16!). The four were arranged as two banks of memory, each bank containing two SIMMs. As SIMM technology advanced, four DIPs were combined into one physical chip, resulting in circuit boards which carried only three chips total - two large and one small. A 386SX motherboard with four SIMM sockets could carry up to 16 Mb of memory total. SIMMs themselves were commonly found in 256kb, 1Mb and 4Mb sizes (though 16Mb versions were available, too). Given four sockets and the 3 common sizes of SIMMS, there were 12 possible memory configurations:

| FIRST BANK | | SECOND BANK | | TOTAL |
|------------|---------|-------------|---------|-------|
| SIMM #1 | SIMM #2 | SIMM #3 | SIMM #4 | |
| 256kb | 256kb | None | None | 0.5Mb |
| 1Mb | 1Mb | None | None | 2Mb |
| 4Mb | 4Mb | None | None | 8Mb |
| 256kb | 256kb | 256kb | 256kb | 1Mb |
| 256kb | 256kb | 1Mb | 1Mb | 2.5Mb |
| 256kb | 256kb | 4Mb | 4Mb | 8.5Mb |
| 1Mb | 1Mb | 256kb | 256kb | 2.5Mb |
| 1Mb | 1Mb | 1Mb | 1Mb | 4Mb |
| 1Mb | 1Mb | 4Mb | 4Mb | 10Mb |
| 4Mb | 4Mb | 256k | 256k | 8.5Mb |
| 4Mb | 4Mb | 1Mb | 1Mb | 10Mb |
| 4Mb | 4Mb | 4Mb | 4Mb | 16Mb |

All SIMMs in a bank had to be the same size and speed, and some 386SX machines required the SIMMS in the second bank had to be the same size or larger than those in

computers.

The 386DX and all 486 machines had a 32-bit data path. SIMMs with 72 pins were designed for these models (though many of these machines still used the 30-pin jobs). The 72-pin SIMMS were larger in size (4 1/4 inches long) and had a slightly different configuration so they could not be mistakenly plugged into a 30-pin socket or vice-versa. Notice the half-moon cutout on the bottom.



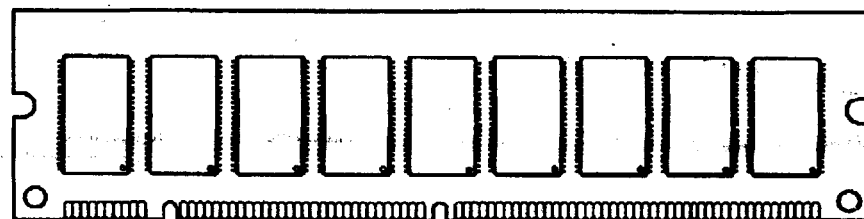
A corresponding bump on the socket prevented mistakenly trying to insert a 30-pin SIMM in a 72-pin socket.

The memory configurations for a 486 that used 72-pin SIMMs were a bit different than earlier computers. First, a single 72-pin "stick" made up one memory bank all by itself, and these came in 4, 8, 16, 32, 64 and 128 Mb sizes. Many 486 machines only had two 72-pin slots on the motherboard. Given these conditions, here are some of the most common possibilities:

| FIRST BANK | | SECOND BANK | | TOTAL |
|------------|---------|-------------|---------|-------|
| SIMM #1 | SIMM #2 | SIMM #3 | SIMM #4 | |
| 4Mb | 4Mb | None | None | 8Mb |
| 4Mb | 4Mb | 4Mb | 4Mb | 16Mb |
| 4Mb | 4Mb | 8Mb | 8Mb | 24Mb |
| 4Mb | 4Mb | 16Mb | 16Mb | 32Mb |
| 4Mb | 4Mb | 32Mb | 32Mb | 64Mb |
| 8Mb | 8Mb | None | None | 16Mb |
| 8Mb | 8Mb | 8Mb | 8Mb | 32Mb |
| 8Mb | 8Mb | 16Mb | 16Mb | 48Mb |
| 8Mb | 8Mb | 32Mb | 32Mb | 64Mb |
| 16Mb | 16Mb | None | None | 32Mb |
| 16Mb | 16Mb | 16Mb | 16Mb | 64Mb |
| 16Mb | 16Mb | 32Mb | 32Mb | 96Mb |
| 32Mb | 32Mb | None | None | 64Mb |
| 32Mb | 32Mb | 32Mb | 32Mb | 128Mb |

You can see from comparing the tables that there is one major difference besides total memory available. The 30-pin SIMMS have to be used in pairs to fill a single bank of memory, while the 72-pin versions can be used singly. A nice touch!

Pentiums are 64-bit machines and would require eight 30-pin modules or two 72-pin sticks. A newer module was devised for current machines with 168 pins, called the Dual Inline Memory Module (DIMM). While the little gold contacts on 30 and 72-pin SIMMS were the same on both sides of the board (and connected to each other), the 168-pin DIMMs, shown here, are different



on the two sides. These modules are also larger than their predecessors (5 1/4 inches wide) and have two notches. A single DIMM services an entire memory bank, and they come in 8, 16, 32, 64, 128 and (!) 256 Mb capacities. We've gone from 256kb SIMMs just a few years ago to 256Mb DIMMs. That is an order of magnitude jump. Wow!

That's all for this month. I've left a lot of stuff out, like SIMM and DIMM speed, and the dangers of using sticks with gold contacts in tin sockets or vice versa. Next time we'll do types of RAM. Happy computing!

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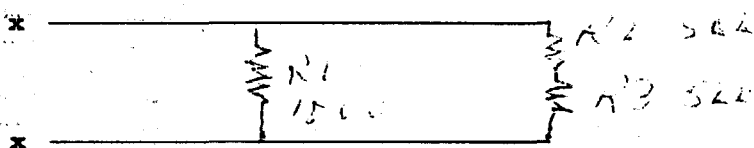
And the winner is..

BSSS March Quiz Answers

BSSS is proud as heck to announce that the winner of the March 1999 BSSS Quiz is Rich Regent, K9GDF, who submitted correct answers to all ten questions. Rich gets a \$25.00 MFJ Badger Bucks gift certificate, \$20.00 in cash, and a NASA photo of an astronaut standing on the lunar surface during the Apollo 11 landing on the moon, man's first, which has its 30th anniversary this coming July. Not a bad haul for fifteen minutes' work!

Here are the questions and answers:

1. Here is a series-parallel resistor combination:



(1) What is the total resistance of R2 and R3?
Ten ohms.

(2) What is the resistance of the combination at the "x" terminals?
Five ohms.

(3) If ten volts are applied at "x", what is the current flow in amperes?
2 amperes. ($I = E/R$. Here, E (voltage) is ten. R (resistance) is five ohms. Thus, 10 divided by five equals 2.

4. Under the above conditions, how much power is dissipated in the resistors?
In a DC circuit, power simply equals voltage multiplied by current. Thus, the arithmetic goes 10 (volts) multiplied by 2 (amperes), which equals 20 (watts). A bit of added information: If the resistance (load, as in light bulb, radio, whatever) remains the same but the voltage doubles, what happens to the power? It

quadruples! That's because the current then doubles, too, due to the increased "pressure" (voltage). This is known in physics as the square law. It would be 20 (volts) times 4 (amperes) which equals 80 watts. Gee, no wonder you don't plug a 110 volt radio into a 220 volt outlet.

2. Who writes a well-known and respected monthly column about computers for BSSS?
Stan Kaplan, WB9RQR.

3. Where is "Rich's Surplus" located?
Look at the back page. It's on Route 2, Stanley, Wisconsin.

4. Why does the very popular G5RV antenna require an antenna tuner?
It is not a resonant antenna.

5. Where can you go to "Recycle" a "Radio"?
Look at the back page again. Radio Recyclers, next to Amateur Electronic Supply.

6. In late summer and early autumn, VHF and UHF signals may travel well beyond their expected range, with strong and steady signals. What is the name of this phenomenon?
Tropospheric ducting. ("Tropo" or "ducting".)

7. If you work a VK6 station on HF, where is that station located?
Australia.

8. Of the three modes listed, which is best for weak-signal work on 2 meters?
AM FM SSB. SSB is correct. The worst 2-meter weak signal mode is FM.

The next BSSS QUIZ will run in our August or September issue.

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USCG icebreaker "Glacier": Part 5

By Sherm Carr, W9NGT

This is the fifth part in a series of the personal log of Sherm Carr, W9NGT, who sailed from Australia to Oregon aboard the Coast Guard's icebreaker "Glacier". His son, Mike, was posted to that ship, and Sherm and son sailed together on her voyage to her decommissioning in Astoria, Oregon.

2030 - still 26 March

Closed down at 1900. We have a pipeline into the Mountain States, and conditions are improving to the Midwest. We have heard very few East Coast stations. This has been a learning experience for me where propagation is concerned. I am sure DX people have known it for years, but my 20 meter education really began when son Mike was assigned to the Glacier three years ago, and I've learned the most since we left Sydney on the 13th. This is 'on the job training' with a vengeance!

Our best station today was in Tucson, Arizona. We've lost most of our great West Coast stations, but they deserve a rest. We hear them, but not well enough for phone patch work.

I am told there may be flight quarters tomorrow and we'll have to shut down. Traffic is tapering off somewhat now though, and we get through the sign up sheet easily before propagation drops off.

On deck, temperatures are cooler now, nearly the same as when we left Sydney. We are back on good old 046 again, and back to 13.7 knots. Son Mike advises we will come to 090 to swing around the Oahu Headland, and then straight in to Maui.

1920 - 27 March

Got up early. Son Mike had the mid watch, and was still asleep. The ship rolled vigorously all night, and I made with the rolled up blanket trick, to stay in my bunk. It woke me up once in a while, which doesn't happen often. We ran patches until the band folded. When it goes, it goes quickly. From a +15 signal to almost nothing in 15 minutes. Weird.

Had dinner in the crew's mess. Prime rib, roast pig and all kinds of goodies, ala a Hawaiian Luau. We can see the lights of Oahu off to starboard some 15 miles away. They are the first we have seen since Sydney, 14 days ago. The hamshack will be secured until we leave Maui.

I must repeat myself. The Maritime Nets, and our always present and dedicated patch stations are truly wonders. They are not amateurs; they are unpaid professionals. It is a rare privilege to post my license in the hamshack and be a part of this service to Glacier's crew.

Tomorrow, my XYL Marianne and my sister Pat will meet us at the dock, and we will have dinner ashore with Captain Hammond and some others. (Don't know just who yet) Then off to play tourist on Maui. Ah, 'tis a tough life!

We are due at the dock at 0800. Judging from the OPS radio traffic, there will be quite a crowd to greet us.

1000 - 28 March

Everyone was up early. Had my roll and coffee, and went topside where Mike's crew were readying lines and gear for docking. Our course for Kahalui Harbor took us almost parallel to the North coast, and almost breathtaking scenery.

Some 30 minutes out, the pilot boat came alongside, and then back to about 8 knots, and straight in. As advertised, Glacier was at the dock at 0745. Mike inched up alongside the dock at dead slow, went astern to put the brakes on, and six monkey fists hit the dock almost with a single thud. (A 'monkey fist' is a round weight attached to the hawser lanyard, which is used to haul in the six inch lines to loop around the bollards) We were tied up at 0759.

Parking a 9000 ton "Canoe" as Mike calls it, takes some doing, but his crew is a well oiled machine. They put on a good show. After Customs Officials released the ship, (Customs comes to the ship in this case) XYL Marianne and sister Pat arrived, and we went to the wardroom for coffee, introductions, and visiting. The engines are silent for the first time in 16 days. It was a great scene on the dock with families and friends!

Marianne and Pat had arrived the day before and were up early to watch Glacier grow from a very small red dot on the horizon to her full size as she came in.

Now, it's up to the hotel, a shower, rent a car, (Mike is going to chauffeur) and off to play tourist for a few days. My journal must wait until I am back aboard. I "wobble about a bit" as the Aussies put it. Walking on pavement that doesn't move is strange, for a short time.

Maui is a small island, but one of the prettiest. Viewed from a park part way up a mountain called "The Needle." Kahalui harbor is an azure jewel, with rugged, long-dead, weathered volcano cliffs on three sides. We trekked to Hanna, (Pronounced Hah-Nah) via a narrow

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Continued from page 7

road with over 100 hairpin turns, past deep gorges, waterfalls, lush tropical foliage, and scenery one sees only in these islands.

On the East side of the island, where the older settlements are, is a monstrous Banyan tree that spreads out over 300 feet in diameter. It covers an entire city block. It is easy to understand why many come here as tourists, and never leave.

2300 - 31 March

Touring time is over. Marianne, sister Pat, Mike and I had dinner with Captain Hammond and his daughter at Maui's famed Chart House. We visited until late, and Mike and I said our good byes, took the car back, and headed for the ship.

Tomorrow we get underway for Astoria, Oregon, nine days away. We are into the home stretch. Today was stormy; very windy and rainy, and the palm trees around the hotel were very noisy all last night. From the looks of the huge seas crashing on the rocky shore around the point, tomorrow may be interesting. Glacier will ride lower now though, with 500 plus tons of sea water ballast, and should ride easier.

1230 - 1 April

We are underway for Astoria. Glacier eased away from the dock on time, but we were delayed getting out because the cruise ship Constellation just came in, and it took all available tugs to get her tied up.

Very heavy seas were encountered as soon as we cleared the breakwater. All "weather decks" are secured, and we are taking rolls that are "Bell ringers." The large ship's bell on the brow of the bridge apron is fixed, but the clapper is free to swing. When the ship's roll reaches about 36 degrees, the clapper swings far enough to sound the bell, hence the term "bell ringers." On the bridge, and at all operating stations, everyone is "hooked up" with safety belts.

Monstrous seas crash over Glacier's bow, which disappears at times! There was some discussion about skirting the storm for easier sailing, but the consensus was keep going and let her roll. And roll she did, for two days. No patch operations today, or tomorrow either. We could not get to the hamshack anyway, as all hatches are secured and dogged down.

1900 - still 1 April

Still very rough going! The Meteorology folks indicate the storm will peak sometime early tomorrow. The wardroom was nearly empty at lunch and dinner, but Mike and I had some soup and a salad. This was a gymnastic adventure, but we made it. Salad was easy, but the soup presented some problems. In a very deep bowl, the process of getting it inside us, and not all over the outside of us, was mostly a matter of precision timing.

The wardroom chairs are secured with lanyards through both chair arms, across one's lap, with snap hooks in eyebolts under the table, which is welded to the deck. The wardroom portholes (sealed shut) go under water every so often. I am told the bridge clinometer registered 49 degrees. Under these conditions there is little traction under foot. One simply slides. Getting from one point to another requires precisely timed movements, and one does not move about unless absolutely necessary. Going up and down ladders is an acrobatic feat of agility not easily executed by an old WWII retread.

Down in Mike's cabin, nearer the roll axis, the ride is easier. As I write, our foul weather gear swings out at crazy angles. Mike took some pictures so I would not be accused of exaggeration. I am braced in a chair wedged against Mike's bunk, with my feet against the stanchion. My penmanship is atrocious, and also requires timing, but I can still write.

The engines rumble on, and Glacier plows through the huge seas as she has done for 31 years. There is no concern among the crew; they have been here before. It is an exhilarating experience!

2200 - still 1 April

Seas are almost imperceptibly diminishing. Mike had the 1600 to 2000 watch, and I was on the bridge for a time, watching some fearsome seas break over the bow. First, the hawse pipes spew geysers, then a wall of water comes over the bow, with spume all the way to the bridge. White foam shoots out for a hundred feet from the bow wave. It is truly an awesome display of Nature's power.

The rain has stopped, but the sky is a mass of lead colored clouds with tremendous, boiling turbulence. We are making less than 8 knots, and the bow rises and falls almost 20 feet, but everyone, me included, is having a ball. There were recollections of down in Drake's Passage, between the southern tip of South America and Antarctica, the world's most vicious stretch of ocean. In a storm down there, Glacier rolled 55 degrees!

0145 - 2 April

Seas are noticeably diminishing and the barometer

Continued on page 9

| CALL | NAME | CITY | E-MAIL/URL |
|--------------------------------------|-------------------------------------|------------------|--|
| KF9TS | Jeffrey A. Schuh | Tigerton | kf9ts@frontiernet.net |
| N9TUA | Carol Ceraso | Chippewa Falls | ceraz@execpc.com |
| WB9TYT | Dan Bolander (WAR Freq. Coord.) | Milwaukee | bolander@execpc.com |
| NE9U | Scott Jasper | Plover | jasper@tccom.net |
| N9UAK | Lois Wise | Tomahawk | wisewynn@newnorth.net |
| N9UBQ | Roland Sacho | Medford | tcmlepc@waun.tdsnet.com |
| KC9UC | Bill Bergs | Wausau | bbergs@dwave.net |
| N9UDO | Steve Schulze | Baraboo | steven9udo@baraboo.com |
| | | | www.thelorax.com/~ssschulze |
| N9UDX | Wayne Burgess | Madison | n9udx@midplains.net |
| KE9UE | Tom Kinney | Tomahawk | tkinney@newnorth.net |
| W9UGT | Bill Aspinwall | Lodi | w9ugt@compuserve.com |
| N9UNR | Dave Barrow | Cedarburg | n9unr@execpc.com |
| N9UPU | Joe Tenor | Green Bay | jtenor@sparknet.net |
| | | | www.sparknet.net/~jtenor/gbasfg.html |
| K9UTQ | Gene Santoski | Wisconsin Rapids | k9utq@wctc.net |
| K9UUT | Rees Roberts | Racine | reesr@wi.net |
| K9UW | Mike Pagel (ex KA9LAQ) | Amherst | pagel@wi-net.com |
| W9UW | Ron Tlachac | Wisconsin Rapids | karenron@wctc.net |
| N9UXG | Sue Wiskow | Arcadia | jcwiskow@win.bright.net |
| NG9V | Gari Berliot | Madison | garib@inxpress.net |
| N9VPZ | David Cooley | New Holstein | dcool@fdldotnet.com |
| K9VSO | Jim Breszee | Madison | k9vso@chorus.net |
| N9VST | Mac Funkhouser | Ripon | macgyver@n9vst.com |
| | | | http://n9vst.com/wpwin |
| N9VWK | Bruce V. Gray | Elroy | bvgsmg@mwmt.net |
| AA9W | Ed Rate | Mequon | edrate@execpc.com |
| WB9WBN | Gerald Werner | Marshfield | werner@dgabby.mfldclin.edu |
| N9WBR | Jeff Ramlow | Amherst Junction | ramlow@wi-net.com |
| KB9WC | Jack Bremer | Markesan | jhbremner@fdldotnet.com |
| K9WD | Steve Schwoegler | Wisconsin Dells | srss@baraboo.com |
| KA9WDX | Bernard Jari | Medford | KA9WDX@webtv.net |
| K9WI | John Kaiser | Oshkosh | jkaiser@vbc.com |
| K9WIX | Clancy Meneau (Manitowoc Co. RACES) | Kellnersville | cmeneau@mail.tcbi.com |
| N9WUN | Charles Savard (Mancorad Club) | Manitowoc | cesavard@juno.com |
| N9WVD | Kirt Krause | Iola | n9wvd@geocities.com |
| | | | www.geocities.com/CapeCanaveral/Lab/8279 |
| W9WW | Don Haney | Wausau | w9ww@arrl.net |
| KA9WXN | Dave Schank | New Berlin | drs@mail.gmtcom.com |
| W9SX | Ronald Schaden (Mancorad Club) | Two Rivers | schaden@mail.tcbi.com |
| W9XT | Gary Sutcliffe | Slinger | w9xt@qth.com |
| | | | www.qth.com/w9xt |
| N9XVG | Peter Schaettle | Onalaska | n9xvg@lse.fullfeed.com |
| KF9XX | Guy A. Boucher | Marshfield | guyboucher@tznnet.com |
| KA9YAW | Wes Michael | Green Bay | Ka9yaw@aol.com |
| W9YCV | Lester Peterson | Greenfield | LcsW9YCV@aol.com |
| N9YJG | David C. Peterson | Chippewa Falls | dcpeters@discover-net.net |
| N9YJJ | Bruce Schaffer | Augusta | n9yjj@discover-net.net |
| N9YLS | Lee Housey | Sheboygan | lhousey@excel.net |
| W9YOA | Jack Klein | Beaver Dam | jklein@peoples.net |
| W9YQ | Dwight G. Bosselman | Oconto | dgbcms@netnet.net |
| WB9YSD | Steve Polishinski | Sun Prairie | wb9ysd@mailbag.com |
| WA9YVE | John Givens | Ixonia | wa9yve@globaldialog.com |
| NZ9Z | John Meyer | Kellnersville | jmeyer@mail.tcbi.com |
| WB9ZBE | Donna Menart | Howards Grove | dmenart@excel.net |
| N9ZET | Fred Diedrick | Edgerton | diedrick@jvl.net.com |
| N9ZIS | Jesse Kujawa | Green Bay | n9zis@aol.com |
| KB5ZJU | Phillip N. Lodde | Sheboygan Falls | plodde@excel.net |
| N9ZLU | Jim Bailey | Neillsville | liljim@badger.tds.net |
| KA9ZPY | Arne Moxness | Racine | amoxness@execpc.com |
| WB8ZSZ | Rev. Sam Morrison | Plymouth | mmorrison@excel.net |
| KF9ZU | Bette Kratz | Big Flats | kratzham@maqs.net |
| K9ZUM | Mike Grady | Mountain | k9zum@juno.com |
| K0ZYP | Dave Gegner | Ladysmith | djgegner@ladysmith.net |
| K9ZZ | Jim Romelfanger | Baraboo | smokesigs@baraboo.com |
| | | | liljim@badger.tds.net |
| Black River Wireless Assn. | | Stevens Point | www.coredcs.com/~maeiden/cwra.htm |
| Central Wisconsin Radio Amateurs | | Eau Claire | kg9mv@ecol.net |
| Chippewa Valley ARES | | | www.danenet.wicp.org/~ares |
| Dane Co. ARES | | | kg9mv@ecol.net |
| Eau Claire Amateur Radio Club | | | www.ecarc.org |
| ECResources, Ltd. | | | www.execpc.com/~kf9cs/ecr.htm |
| Fox Cities Amateur Radio Club W9ZL | | Appleton | http://w9zl.ampr.org |
| KMRA VE Team (Waukesha Area) | | Waukesha | 103357.3222@compuserve.com |
| Madison Amateur Radio Clubs | | Madison | http://members.aol.com/staskc2ak/ |
| Marinette/Menominee ARC | | | mmarclub@hotmail.com |
| | | | www.cybrzn.com/~grizzly/mmarclub/ |
| Marshfield Area ARS | | Marshfield | waltfriant@tznnet.com |
| Milwaukee Area Amateur Radio Society | | Milwaukee | www.execpc.com/~n9lkh |
| Milwaukee Area SKYWARN Association | | Milwaukee | svoros@execpc.com |
| | | | www.execpc.com/~svoros |
| Morse 2000 Project | | Eau Claire | www.uwec.edu/Academic/Outreach/ |
| | | | Morse2000/morse2000.html |
| Near Space Sciences | | | http://tbcnet.com/~davidc/nss.html |
| Ozaukee Radio Club | | | edrate@execpc.com |
| | | | www.execpc.com/~nhar |
| Racine Megacycle Club | | Racine | w9udu@wi.net |
| | | | www2.wi.net/~hamradio/ |
| Red Cedar Repeater Association | | | http://discover-net.net/~tazman/ |
| | | | rcrainfo/rcrainfo.html |
| Rib Mountain Repeater Assn. | | Wausau | nelles@dwave.net |
| Riverland Amateur Radio Club | | La Crosse | www.centuryinter.net/rarc/ |
| Rock County ARES & SKYWARN | | | rcares@hotmail.com |
| | | | www.qsl.net/rcares |
| UW Space Place Amateur Radio Center | | Madison | www.sal.wisc.edu/spaceplace |
| Washington County ARC | | | www.nconnect.net/~wcarc |
| Watertown Amateur Radio Club | | Watertown | wa9yve@globaldialog.com |
| West Allis Radio Amateur Club | | | www.execpc.com/WARAC |
| Wisconsin Association of Repeater | | | n9uur@execpc.com |
| | | | www.gmtcom.com/war |
| Wisconsin Emergency Management EOC | | Madison | RACES@DMA.STATE.WI.US |
| Yellow Thunder ARC | | Baraboo | www.thelorax.com/~ssschulze |

Updated 4/18/99 - Complete listing

Note that e-mail addresses and Web URLs may be case sensitive.
Send additions and changes to wa9pov@execpc.com.
This list is also available at www.execpc.com/~wa9pov/bsslist.html.

The 1999 Great Circus Train

Here is some preliminary info about the 1999 run of the Great Circus Train. Full details will follow in June's issue.

The trip has been extended to four days from two. Day One (July 2) is Baraboo to Janesville. Day Two, the train goes all the way to Appleton, with scheduled public viewing stops in Waukesha and Oshkosh. Day Three, the leg is Appleton to Green Bay (where a public viewing stop will be made) to Fond du Lac. Day Four (July 5) is Fondy to Milwaukee. Check: <http://www.circusparade.com> and www.circusworldmuseum.com

This is the first time the train will venture into the Fox Valley area. Bring everyone you can and see something you've probably never seen before! Don't forget the cameras and camcorders.

Hams on board will operate on some repeaters, and W 9 R will operate on 146.55 FM simplex as time allows, as well as on 7.240, 14.240, and 21.340, one band at a time, starting around 1430 UTC daily, perhaps earlier on Days Two and Three. Certificates require a 9 x 12 SASE and QSL to Jim Romelfanger, K9ZZ, 412 1/2 Ash Street, Baraboo, WI 53913-2501.

Continued from page 8

has bottomed out and begun to rise, so we are out of the worst of it. Time to roll up blankets and prop up my mattress. I was somewhat apprehensive, because I haven't experienced this weather aboard ship since WWII. I was vastly relieved to find I could handle it. I think Mike was relieved too.

1300 - 2 April

Seas are well down today. Six engines on the line to make up lost time, and the desk jiggles with the vibration from prop wash against the hull. We are making 16.6 knots on good old 046 for Astoria. My plot on Bill's map is a straight line, mostly.

I checked out the hamshack, and the equipment is all OK. Each time we shut down, everything is secured, so I was not concerned. The chairs, wastebasket, and a combination chest and seat were all tipped over, and the deck was a mess from the emptied chest and wastebasket. The clock took a beating. It shook loose from its velcroed mount and was hanging by the line cord. It was still running, but was 10 minutes slow.

Talked with the USCGC Midgett up in the Bering sea, and they were really hammered. 70 MPH winds, 26 foot seas, and they rolled 58 degrees. Glacier personnel were concerned for them, and were relieved to hear all was well aboard the Midgett.

It's not too comfortable in the shack today, with the heavy ground swell in the aftermath of the storm, so, after briefing the Net and our patch stations on our adventures, we secured. We'll go back at it tomorrow.

The hamshack will be secured three days out of Astoria, I am told, as the gear must be inventoried and packed up. It is scheduled to go to the USCG Cutter Westwind. They will be getting some fine equipment.

2230 - 3 April

Settled in, plot chores done, and coffee, now that it is much cooler. We had a good day. Many, many contacts, but not too much patch traffic. Generated some pileups, but got everyone we could hear. Some gabbed on and on, holding things up. One got so windy we just moved up and told everyone else to come along. He got the message when he found he was talking to himself.

Ran a patch to my home, and found Marianne and sister Pat had arrived home safely, and she has been telling everyone about the trip. She was concerned about the storm, because she and Pat watched us depart Maui, and could see Glacier pitching in the heavy seas.

2130 - 4 April

Mike and I had dinner this evening with the Captain and his father, a retired Admiral, who came aboard at Maui to make the trip to Portland.

The ship has been running in the heavy ground swell trough all day, and occasionally takes a vicious roll. After dinner, strapped in with Bungee cords, we were having coffee, when a big roll duped me neatly to the deck! The first real mishap of the trip, and it has to be in front of the Captain! But the only casualty was my pride. Mike said, "There is a real trouper! He gets dumped to the deck, and saves his coffee!"

Mike made a fast move and rescued the Admiral's coffee cup. The Captain said the fast move was because the cup was headed for Mike's lap.

Mike is at his journal and I am working on mine. He is describing my "side flip" after dinner tonight. He was opposite me at the table, and when I went over, all he saw was an arm sticking straight up, with a cup of coffee at the end of it. The rat!

2200 - 5 April

We ran quartering to the seas today, and Glacier rides much easier. In looking back, (To avoid repeating myself too much) I may mention Glacier's 'roll' and her behavior a little too often, so I will try to minimize those comments.

Had a steady stream of visitors in the shack. It is a three cornered compartment, one side of which is the hull, located two decks below the starboard bridge wing. It gets a bit cozy occasionally, when more than three or four people are in with us. We have crew members talk to the patch stations that have been taking good care of them this whole trip.

We hear and talk to the entire U.S. now. The West Coast is back in solid. It is cool now, and a jacket is necessary out on deck in the evening. I worked on the QSL list some, but just to get logs and station lists complete. The big job will come when I get home. I hope I have enough cards. Again, my mind reverts to Glacier's decommissioning, and the retirement of the ship's call, KC4USG. I must make a note to speak to Lt. Laurie Dowd about that.

Glacier rumbles on, at 16.2 knots, on good old 046, with her usual slow, sedate roll.

Another time zone change at 2315, and one more to get on West Coast time. That will take care of 11 time zones. But its bunk time. Tomorrow will be the last day in the hamshack. Today was to be it, but we're having so much fun we'll get one more day.

Next month: We wrap up the remarkable journal of W9NGT's adventures on the Glacier.

PARTICIPATING CLUBS AND ORGANIZATIONS

Wisconsin Association of Repeaters

Mark Heimmermann, KF9CS, Secretary
1523 E. Moonbeam Tr. • Appleton, WI 54915



War Minutes
March 13, 1999

Meeting was called to order by the Chairman, Gary Bargholz, at 1:10 p.m. It was held at Titledown Brewing Company in Green Bay.

Introduction of members and guests:

| | |
|--------|---------------------|
| N9VSV | Jeananne |
| N9UUR | Gary |
| N9JUJ | Terry |
| N9GDY | Harry |
| KB9QXJ | Mark |
| K9OQO | Jim |
| N9OET | Virginia |
| KG9AL | Mike |
| K9PJB | Dick |
| WB9QXO | Jack |
| KA9BHK | Diane |
| KA9BHL | Mike |
| W9BLI | Jake |
| WB9MFB | Ron |
| WA9JOB | Nels Harvey |
| WA9POV | Dave Knaus |
| N9GHE | Rodney Pajula |
| KB9ENO | Bill Neimuth |
| KF9CS | Mark Heimmermann |
| N9PMR | Rick Waedekin |
| W9RIC | Rick Kosiorek |
| WB9MHS | Virg Burmeister |
| WD9EGA | Margaret Burmeister |

Secretary's report

There were no additions or corrections to the minutes. N9GHE made a motion to accept the minutes of the last meeting as printed in the newsletter. The motion was seconded by KB9ENO and approved by the members present.

Treasurer's report

The current account balance is \$2191.20. There were no outstanding expenses at that time.

Newsletter report

The annual renewal form was not included in the last newsletter. A motion was made by WA9JOB to send a second mailing including the renewal application to the repeater owners/trustees. The motion was seconded by N9UUR and approved by the members present.

Coordinator's Report

No problems or questions on Dan's report as printed in the newsletter.

SNP stands for "Shared Not Protected". SNP is being adopted by Wisconsin's neighboring states. W.A.R. is attempting to clear the following frequencies: 145.230 and 442.125. The frequencies are used for emergencies, testing and special events. Operation on these frequencies must be of short duration and require coordination with Dan.

Rick Kosiorek, W9RIC, is the only person in the state using 442.125. Dan and him have been in contact. Rick is cooperating with W.A.R. and agrees to change his repeater frequency to 443.175. A motion was made to assist Rick in changing to the new frequency. The motion was seconded and approved by the members present.

Chairman's Report

Web Page: Gary thanked Dave, WA9POV, for all the work he has been doing on the W.A.R. homepage.

Close Spacing Document: The final draft has been completed. The only change

is that PL decode will be required on all new coordination of close spacing repeaters. Illinois is taking the W.A.R. document back to its members for discussion. Even if Illinois agrees with our document they want a signed agreement between Wisconsin and Illinois. Minnesota is reading over our document and, considering developing one of their own.

ERP and HAAT Forms: The ERP and HAAT forms were approved at the meeting in December. Some people have indicated problems with the HAAT forms. There are a couple options available to trustees filling out the forms. One is to purchase topographical maps and plot their sites. The second is to contact a consulting firm and pay \$15 for each site. For more information on the consulting firm or if you are totally lost contact Nels Harvey, WA9JOB.

NFCC Meeting at Dayton: An NFCC Forum will be held at the Dayton Hamvention in Room 3, on Saturday, May 15, 1999 from 12 noon to 12:45 p.m. Please check your Hamvention program after you arrive to confirm the meeting time and location.

Old Business

Jim, K9OQO, expects W.A.R. to receive money from the ARRL for its Repeater Directory any day.

New Business

NFCC: There is a correction to Nels title in the last newsletter. He is not the NFCC Chairman. Nels is the liaison from W.A.R. to the NFCC, and the Chairman of the NFCC PRM Committee.

Nels thanked WAR for the financial assistance to attend the drafting of the NFCC document. Nels also thanked the anonymous individual who helped with the frequent flier miles. Nels passed around some pictures of the movers involved with the proposal.

The purpose of the NFCC is to require coordination of all repeaters by groups recognized by the FCC or its designees. The number 1 priority of the group is to complete the documentation for the proposed rule making. The initial draft was approved by the NFCC membership and then submitted to the ARRL for its backing.

The ARRL took no action to support the document because it lacked supporting information (because of schedule deadlines support information was not prepared). Therefore the NFCC is pulling together all the support information in preparation for the ARRL's next meeting. If the ARRL does not support the document the NFCC will submit by itself without the ARRL.

Election of Officers: The floor was opened for nominations for WAR officers. The following nominations were made:

Chairman: Gary Bargholz, N9UUR
Vice Chairman: Mike Hamman, KA9-BHL

Secretary: Mark Heimmermann, KF9CS

Treasurer: Jim Sheetz, K9OQO

Technical Director: Scott Thompson, WB0WOT

A motion was made, seconded and approved to close the nominations. The members present approved the existing officers for another year.

Gary, N9UUR, has contacted the appointees listed below and they have agreed to serve for another year.

Continued on page 11

Wisconsin Nets Association Ltd.

Art Evans, KA9KLZ, Secretary
213 N. Jefferson • Cuba City WI 53807-1558

WISCONSIN NETS

| Net | WNA | Freq. | UTC | CDT | Manager |
|---------|-----|---|--------------------------|------|---------|
| BWN | Yes | 3985 | 1100 | 0600 | W9RCW |
| BEN | Yes | 3985 | 1700 | 1200 | KE9VU |
| WSBN | Yes | 3985 | 2230 | 1730 | WB9WHO |
| WNN | Yes | 3723 | 2300 | 1800 | KB9OCZ |
| WSSN | Yes | 3645 | 2330 | 1830 | N9BDL |
| WIN/E | Yes | 3662 | 0000 | 1900 | WB9ICH |
| WIN/L | Yes | 3662 | 0300 | 2200 | W9UW |
| RCRA | No | 01/61 (Mondays CDT) | 0030 (Menomonie Area) | 1930 | KA9OMC |
| Gr. Bay | No | 72/12 (Green Bay Area) | 0245 | 2145 | WB9NRK |
| ARES | No | 4.65/5.25 (South East/South Central Wisconsin) | 0200 | 2100 | |
| RACES | No | 3993.5 (LSB Sunday) | 1400 | 0900 | WA9OAY |

WISCONSIN NTS TRAFFIC REPORT March 1999

| NET | SESSIONS | QNI | QTC | TIME |
|-------|----------|------|---------|------|
| BWN | 30 | 1390 | 1772 | 2252 |
| BEN | 29 | 580 | 68/47 | 904 |
| WSBN | 29 | 560 | 123 | 957 |
| WNN | 31 | 137 | 16 | 360 |
| WSSN | 31 | 241 | 34 | 351 |
| WIN/E | 29 | 226 | 110/103 | 326 |

BPL

| Station | ORIG | RCVD | SENT | DLVD | TOTAL |
|---------|------|------|------|------|-------|
| K9JPS | 1 | 519 | 46 | 343 | 909 |
| W9RCW | 0 | 399 | 39 | 260 | 698 |
| K9RTB | 0 | 395 | 63 | 186 | 644 |
| W9IHW | 1 | 333 | 68 | 196 | 597 |
| WB9YPY | 0 | 270 | 281 | 0 | 551 |
| K9GU* | 0 | 272 | 31 | 189 | 492 |

Now, we really need a digital (PACTOR/AMTOR) station to help with the task Hale, W9CBE has been doing. Hale graciously agreed to continue as Asst. STM and accept reports for me, and Rick, W9RCW, has generously offered to pick up reports on the BWN. Lee, N9BDL, has been good to relay reports from the WNN and WSSN. I will continue to send out the report from Wisconsin to League Headquarters on the 7th of the month, so the deadline will continue to be the 6th. I usually am active on the BEN, WSBN, WIN-E, and WIN-L. Reports can also be sent via e-mail to me at

K9LGU@arri.net

or onewish@compufort.com

Gene, K9UTQ, has offered to resurrect his column on traffic handling in the near future, so watch the BSSS and recommend its reading on the nets.

One of the features that makes our Wisconsin nets outstanding is the net discipline. The savvy net control stations know how to keep the tone friendly and easy-go-

ing, but to get the business of the net done as efficiently as possible. Newcomers are welcomed and never made to feel out of place. Experienced traffic handlers show by their example how things are to be done. Listen for it. The discipline is there. It's a great attribute of our Wisconsin nets.

While Hale and I were off frequency handling a message for Fort one noon, an unidentified (hence illegal) station kept QRMing us with comments that we were wasting space on the airwaves because the message had a phone number and someone could just call up the recipient. The operator (is the term lid still in use?) just didn't understand that we do this for practice. We do this so we'll be good at it when there are no phone lines. Maybe we have to remind ourselves of that on the nets occasionally. 'Nuff soapbox.

Thanks for all the help. I wasn't going to start this until May. Well, it's begun. 73.

Denny Rybickie, K9LGU
Wisconsin Section Traffic Manager
April 6, 1999

Wisconsin Valley Radio Association

Kim Kunze, N9SDL, Secretary

P.O. Box 363 • Wausau, WI 54402

Six Meter Repeater: 51.19 Input/52.89 Output

Meeting Minutes April 1999

Meeting called to order by N9SDI. Members present included: N9NMH, N9MEA, KB9FRB, KB9DZG, KB9MCZ, KC9NW, KB9UCQ, N9NQW, N9NRC, KB9RXA, KB9DED, N9TTA, W9WW, N9LIA, WD9CPY, N9IAB, N9SDL, KB9QHR, K9QM, N9QQ, N9FOL, N9NRA, KB9RXB, N9PHC, KB9MCZ, KB9RWY, KB9SBT.

Minutes as published in BSSS approved by W9WW and N9TTA.

Treasurer's report approved by N9NMH and N9TTA.

Upcoming events include:

1. Dream Flight Training at Rib Mountain School - April 12 and 15. Additional information will be announced on net or contact N9SDL.

2. MS Walk on April 18, 9:00 a.m. to 3:00 p.m. About 6 hams needed for communications support - contact N9LIA.

3. Wisconsin Amateur Radio Recognition Day April 22.

4. Wausau Dream Flight will be May 3-7. Announcements of hamfests were also made.

Old Business

KC9NW announced that ARES training will begin soon, plus the annual weather spotting training should be announced soon. Listen to the net for details.

N9NMH reported that we still need control operators for the 3rd Wednesday. Contact Matt if you can help out.

Jack, N9LIA, made payment of \$35 with the Samoset Council, BSA for rental of Camp Phillips for Field Day, June 26-27, 1999.

A copy of the repeater policy *WVRA Repeater Operating Procedures and Policy* was presented as a recommendation of the WRVA board to the members for consideration. After review it was approved by

members present after motion by N9NRA and 2nd by N9IAB.

KB9MCZ and WD9CPY (Membership Committee) put together some very good work on membership retention and acquisition. Thanks for your hard work. Now the really hard work begins, to implement and use the suggestions presented.

New Business

May 4th in room F207, 7:00 at NTC, a representative of the National Weather Service will present information on Weather spotting. After discussion and a motion from N9IAB and 2nd by N9TTA, we will hold our business meeting after the presentation.

Nominees for then new WVRA board of directors is as follows:

Matt, N9NMH
Mark, N9MEA
Mike, KB9DED
Mike, N9IAB
Kim, N9SDL
Don, W9WW
Andy, N9NRA

After a motion from N9QQ to close nominations and 2nd by KB9DZG, the motion was amended by W9WW and 2nd by N9TTA to direct the secretary to cast unanimous vote for the nominees presented. The motion and its amendment was passed by members present.

Congratulations to the new members, Don and Andy, and thanks to the other five who offered to continue this next year.

A special thanks to Jim, N9SDI, and Jack, N9LIA, for their help and service given to the club over the last few years of their service.

The members of the club also recognize the passing SK of Ben Sternberg, Jr., W9VHA.

Adjournment by
KB9DZG and N9NRA

The Racine Megacycle Club

Club Station W9UDU • Racine, WI

Dennis Doonan, W9DAD, Secretary

c/o RMC • P.O. Box 3 • Racine, WI 54301-0003

e-mail: w9udu@wi.net

Web: <http://www2.wi.net/~hamradio/>

Voice mail: (414) 552-6RMC • ARRL Affiliated

Providing communications for American Red Cross and ARES

MEETING MINUTES March 9, 1999

The March 9, 1999 regular membership meeting of the Racine Megacycle Club Inc. was opened at 7:34 p.m. by President Rees, K9UUT. Vice president Bob, W9EH, Secretary Dennis W9DAD, and Treasurer Greg, KB9RMA, were present.

Secretary W9DAD read the minutes of the February 8, 1998 regular membership meeting. W9EH made a motion to accept the minutes as read, KB9HAM seconded, and the members approved.

Treasurer KB9RMA read the treasurer's report. W9EH made a motion to accept the report as read, KA9OIL seconded, and the members approved.

WB9USI asked Dan KA9OIL to report on the last hidden transmitter hunt. KA9OIL, KF9ZT, and WB9USI all reported the adventures and misfortune of K9RI's team on the last fox hunt.

For old business, N9ZWE resigned as club historian. The historic material in her possession was put into storage.

President K9UUT again summarized the letter from the Red Cross about our use of the building. K9UUT announced that starting July 12, 1999 our meetings would be held at the Gateway Technical College conference center. The GTC facilities are not available during June and August. It was suggested that the June meeting be at Field Day and that the August meeting be a picnic.

WB9USI made a motion that the secretary of the RMC send a thank you letter to the American Red Cross thanking them for the use of their facilities over the past 25 plus years. KA9OIL seconded and the membership voted in favor.

W9DAD reported that the RMC is not

and has not been an ARRL Special Service Club for several years. Our status as an affiliated ARRL club is also in question. W9DAD reported on the steps taken to regain our SSC certification.

Under new business, auction chairman KF9ZT went over the October 1, 1999 Ham Radio and Computer auction flier and rules.

K9UUT announced the board's decision to operator only two transmitters for the June 26 - 27, 1999 Field Day. The emphasis will be on simplified operation and attempt to approach Field Day the way it was done in past years.

K9UUT announced that Jonathan, KB9PUF, the RMC activities director, has resigned and that a special election will be held. N9WHR nominated Kevin, KB9LLV for the position. W9EH made a motion to close the nominations. N9WHR seconded and the membership approved. WB9USI made a motion that a unanimous ballot be cast. N9WHR seconded and the membership approved.

John, KA9RZL, announced a tornado drill will occur April 22, 1999 from 1:15 p.m. to 2:00 p.m.

KA9RZL announced a tornado spotting class will be held on April 15, 1999 at room 109 of the Racine Center at Gateway Technical College. Classes will be offered from 1:30 to 3:00 p.m. and from 6:00 to 8:00 p.m.

WB9USI suggested that 1999 be the RMC "Year of Preparedness." WB9USI offered to present a Y2K update at the next meeting.

N9WHR made a motion that the meeting be adjourned at 8:50 p.m. KA9OIL seconded and the membership voted in favor.

Submitted by:
Dennis, W9DAD, Secretary

Mancorad Radio Club

Mary Langer, KB9GOY,
Secretary

P.O. Box 204 • Manitowoc, WI
54221-0204



2-Meter Repeater: 146.01 Input/146.61 Output

MANCORAD MINUTES April 14, 1999

The meeting was called to order at 7:38 p.m. by President Fred, W6BSF. Introductions were made all around.

The minutes of the March meeting were approved as printed in "Badger State Smoke Signals" with a motion by Dick, N9QFY and a second by Ken, K9HAG.

The treasurer's report was read by Roger, W9NPX, and was approved with a motion made by Lyle, WB9VTM, and a second by Ken, K9HAG.

OLD BUSINESS

Fred, W6BSF, read two thank-yous from members of our club who had new babies. Jim, KB9GOX, and Julie, N9PZX, had a boy in February and Tom, KB9GRC, and his wife Peggy had a boy. The club sent gift certificates. Congratulations to the new parents.

The AR7 vertical antenna is all fixed and tuned and ready for use for the sub event coming on April 24 and 25. Thank you Fred, W6BSF, for your time to do this.

A few members of the club gathered in the club room one Saturday morning to

begin the clean-up process and they did very well at organizing things. After the meeting, any member who was interested went to the club room to see if there was anything of interest to them. Some of the items left over will be put on the club table at the hamfest on May 8.

A report on the hamfest shows things are coming together very well. If you haven't signed up to help out please contact Fred, W6BSF, to get your name on the help sheet. Advance ticket price is \$3.00 and \$4.00 at the door, and you can get those from Roger, W9NPX. There will be a pre-hamfest meeting on Wednesday, May 5 at city hall in the club room. Please try to attend if you are helping out.

If anyone is interested in the banquet at the Fawn on May 8 after the hamfest please contact Fred, W6BSF. He will be reserving some tables so please let him know if you are interested.

Janice, N9IQZ, made up a certificate for the sub event and she did an excellent job. It is coming up very fast on April 24 and 25, Saturday and Sunday. If you are interested in operating contact Fred, W6BSF, to get your name on the schedule so everyone isn't there at the same time.

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SHEBOYGAN County Amateur Radio Club

Steve Eisold, AA9SJ, Secretary

2220 N. 20th Street • Sheboygan WI 53083

2-Meter Repeater: 146.06 Output

April 1999

The April meeting of the Sheboygan County Amateur Radio Club was called to order by Vice-president, Larry, WB9FXQ, at 7 p.m. local time.

There were 12 members present at the meeting. The SCARC meets every second Tuesday of the month at the Red Cross building, 2032 Erie Ave. Sheboygan. With construction almost completed, we will now meet upstairs in one of the newly built conference rooms.

Steve, N9TRK, gave a treasurer's report, with no expenses this month, the balance is \$906.02.

The Activity Award for the April was given to Bob, KG9OM. Bob just bought a new rig and put it to the test. With the bands becoming more active remember

just log the contacts and bring your log to the next meeting. Any band, any mode, counts as a contact, repeater contacts do not count.

Art, K9XJ, gave a short DX report commenting that the packet cluster is full of DX spots and solar index is rising.

Ham of the Year Award was also presented at the meeting. Art, K9XJ, winner of the 1998 award, and a committee of four club members went through the nominations finding a member who most closely filled the requirements. Mike Musiel, K9SJ, is the recipient of this years award.

Art commented that Mike's help at VE sessions, Field Day operations, practical demonstrations at club meetings were just

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Wisconsin Association of Repeaters

Continued from page 10

Frequency Coordinator: Dan Bolander, WB9TYT

Newsletter Editor: Ray Vollrath, WD9HOD

Web Master: Dave Knaus, WA9POV

The next meeting will be June 12, 1999 in Tomahawk.

Gary, N9UUR, made a motion to adjourn the meeting. It was seconded by Nels, WA9JOB, and approved by the members present.

The meeting was adjourned at 2:27.

Respectfully submitted:
Mark Heimmermann (KF9CS)
Secretary,
Wisconsin Association of Repeaters

ManCoRad Radio Club

Continued from page 11

NEW BUSINESS

April 19-23 has been proclaimed Tornado Awareness Week and there will be a statewide drill on April 22.

We had a guest from Green Bay Mike and Key Club, Keith, KS9WI, join us for our meeting. He brought down some literature from the Packerland Amateur Skywarn Society. Thanks, Keith and we were glad to have you at our meeting. The 7th annual Leukemia Society Bike Tour will be coming through our area again on July 24 and 25. Contact Steve, N9PBL, if you are able to help out on either or both of those dates.

Again, we have an open invitation from Sheboygan to join them for Field Day on June 26 and 27. Let Fred, W6BSF, know if you are interested and he will give you details.

John Glaeser, WB9ESM, is in the VA hospital in Milwaukee. If anyone is interested in sending him a get well card his address is: Clement J. Zablocki VA Medical Center, 5000 West National Ave., Milwaukee, WI. 53295, Rm. 1009-3. Ph. 414-384-2000. I'm sure he would appreciate getting a little cheer and good wishes.

The monthly membership drawing was held and WB3AVX, John Sell, had his name drawn. He was not present so the next drawing is \$8.00.

Meeting was adjourned at 8:23 p.m. with a motion by John, NZ9Z, and a second by Theresa, KB9KXE.

After the meeting Tom, KB9GRC, showed the club an emergency HT 12V power pack he designed. Thanks, Tom, for sharing that with us.

Submitted for approval
Mary Langer, KB9GOY
Secretary

CALENDAR OF EVENTS

April 24 and 25 - Sub weekend on the USS Cobia

May 5 - Pre-hamfest meeting at the club room - 7:30 p.m.

May 8 - Hamfest

July 24 and 25 - Leukemia Bike Tour

October 5 - Kewaunee Nuclear Plant drill

October 9 - Fall family picnic at Lincoln Park

January 7, 2000 - Christmas Party at Cedar Ridge

MEETING ATTENDANCE

| | |
|------------------|----------------|
| W6BSF - Fred | N9VIA - Oran |
| K9DUX - Bill | W9NPX - Roger |
| WB9VTM - Lyle | N9FVZ - Dan |
| KB9GOY - Mary | KB9NTL - Don |
| AA9WI - Paul | N9QFY - Dick |
| WB9VYO - Vic | KB9KXF - Gene |
| KB9GRC - Tom | N9XEZ - Bill |
| NZ9Z - John | K9HAG - Ken |
| WS9X - Ron | N9UGI - Dave |
| N4WGK - Denise | N9IQZ - Janice |
| KB9KXE - Theresa | AA9MT - Glenn |
| KS9WI - Keith | N9GHE - Red |

Sheboygan County Amateur Radio Club

Continued from page 11

some of the reasons for being chosen.

A second award was also given at the meeting, the lesser-known "Luckiest Ham of the Year" was given to Jack, WB9-GTX. Earlier in the month, Jack went to AES in Milwaukee and returned home winner of the HT door prize. Second radio in 5 years. Congratulations to both Mike and Jack.

Next VE session will be May 15th. Code exams will now be given from audio CDs rather than cassette tapes for better sound quality.

Sunday, April 18, the MS walk will be held in Sheboygan. Larry, WB9FXQ; Bob, KG9OM; Steve, N9TRK; Sky, N9-XRU; Charlie, N9SVV; Ricky, KB9TNV; and Steve, AA9SJ, will be providing communications throughout the 7 mile walk-run fundraiser.

Construction is finally completed on the National Weather Service transmitter. Now transmitting on a frequency of 162.525 MHz, it will be updating local

weather 24 hours a day and coverage should be the entire Sheboygan county area. The building plans for our area in the basement have been approved, a date later this summer for construction will be announced.

Bob, KG9OM, coordinator for club Field Day activities this year, reported that equipment and people are coming together. Several operators from Manitowoc will also be joining us this year.

Program for the evening was a video from the ARRL, "Field Day Fever".

It's never too early to start planning. The May meeting will deal almost completely with Field Day organization. If you plan on making it to Field Day don't miss this meeting.

For those of you who are not on the web and have correspondence for the club our address is: P.O. Box 1282, Sheboygan WI 53082-1282.

Net Schedule

8 p.m. Monday nights, SCARC Fun Net, 147.06 PL 107.2, +.

Respectfully submitted:
Steve Eisold, AA9SJ

Quarter Century Wireless Association Southeastern Wisconsin Chapter 162

Larry McCalvy, WA9JMO
5400 Six Mile Road
Racine, WI 53402



Our Anniversary brunch provided our members and guests an opportunity of socialization and rich conversation as they sampled the bountiful array of culinary delights the buffet tables offered. Our president, Spencer Clope, W9LHD, was unable to attend; the illness bug restricted him to his QTH. VP Bill Komistra, W9-OVZ, handled the administrative business, and Larry McCalvy presented a slide show on his recent Panama Canal Cruise. Special thanks to Lori Buska (Don, N9OO's daughter) for her fine assistance with the slide projector. The history files had been updated and were on display and a multitude of extra pictures from the last five years of social events were given to the members for their personal photo albums.

Our next business meeting will be held at PJ's Bar and Grill, 4659 75th Avenue in Kenosha on Monday, May 17th at 7:30 p.m. The diners may want to gather at 7 p.m. to enjoy a meal or beverage before the hectic business of the evening gets underway.

Seven chapter members, Al Algiers, W9HR, Spencer Clope, W9LDH, Fern Fisher, W9LCJ, Bob Jensen, W0WLN, Bill Komistra, W9OVZ, Ed Konicek, W9NVK, and Larry McCalvy, WA9JMO will join Kathy Madson, N9ZWN, Bill Firchow, NW9P, Lloyd Gorsiske, WB9-RGO, Mike Melnik, N9PMO, and Rick Panyk, KG9ER, as communicators in the annual Lutheran High School walk on May 7th. The school officials are very appreciative of our service and the gang has a good

time in this community event. We also get a nice "T" shirt.

Our chapter has been asked to participate in Racine's third Intergenerational Fair. The Fair sponsored by our County's Retired Senior Volunteer Program is trying to preserve our country's cultural and ethnic heritage by joining together the older generation with the younger (elementary school children) to reveal, share and relive old arts, crafts, skills and other talents. The day-long event has the older adult volunteers place examples of their craft, skill, hobby or art on tables. Students come to watch demonstrations, ask questions and learn by actually trying many hands-on activities. Amateur Radio, now part of the 24 different crafts and hobbies offered in seven local schools will share ARRL's Archie's Ham Radio Adventure comic book, allow the young folks the opportunity to talk on a two-meter repeater, and tap away on a table full of code oscillators. We will also have a world map surrounded with QSL Cards and color yarn attached to the card from its point of origin. I would like to thank Tami Gardner, KB9SXI, for all her help on the mini fair at St Lucy's school on April 14th. We learned what worked and what didn't. Armed with this knowledge, our future encounters with the younger generation should be more productive and we may be able to glean a few future hams to help keep the Amateur Radio ranks active.

73, Larry McCalvy, WA9JMO

Taylor County Area Amateur Radio Club

Mike Schoenfuss, N9GHZ, President

P. O. Box 401

Abbotsford, WI 54405

MEETING ANNOUNCEMENT

The next regular meeting will be held on Thursday, May 6th at 7 p.m. in the Emergency Government meeting room located in the basement of the sheriff's annex to the Taylor County Courthouse, corner of 2nd and Ogden Sts., Medford, WI. Talk-in on the 147.15 Medford repeater (+600 kHz) or 146.52 MHz simplex.

CLUB ANNOUNCEMENTS

✓ Please note that we are still without a club secretary for 1999. Anyone wishing to volunteer to fill this position should contact a current club officer.

✓ For several months now, someone has been linking the 147.15 Medford and 146.64 Wausau repeaters. This is occurring randomly, on many different dates and at different times. Hams conversing on the .64 machine apparently do not realize that there is an active link between the two machines, and it appears that the link is being established by a third, unknown party. In addition, on many occasions, it became apparent that both hams involved in the QSO are nowhere near the Medford area, therefore, there would be no real need to have the two repeaters linked.

A check with the .64 repeater's sponsors revealed that they have nothing in

Please turn to page 12

OFFICIAL PUBLICATION OF CENTRAL WISCONSIN RADIO AMATEURS, LTD.

At University of Wisconsin, Stevens Point

WATTS SNOO



WB9QFW 2-Meter Repeater 146.07-.67 and Club Station

2229 Dixon Street • Stevens Point, WI 54481

Meeting Minutes • April 14, 1999

President Al Mallek, K9WVM, called the meeting to order at 7:31 p.m. A motion was made by Art Wysocki, N9BCA, and seconded by Bob Baird, W9NN, to accept the minutes from last month's meeting as printed in the *Badger State Smoke Signals*. The motion passed. Joe Omernik, N9CGV, read the treasurer's Report. A motion was made by Art, N9BCA, and seconded by Ron Howe, NJ9H, to approve the report as read. The motion passed.

Bob, W9NN, reported that we need to register the 146.985 repeater with W.A.R. Forms need to be filled out and the only time that they would ever need to be re-done again is if we moved the repeater to a new location. We will need to do the same for the 146.670 repeater. Ron reported on several prices of new batteries to be used as backup power on the .985 machine. After some discussion, a battery was selected and Ron will purchase it for the .985 Repeater. Ron said there is a new UHF repeater in town. It is 444.875 +5.

Mary Eiden, KG9OK, reported that she has been getting e-mail from members asking for autopatch codes. She said she had forwarded the list of paid members to Mike Pagel, K9UW, and that she will send this same list to Ron, NJ9H, so that he can send copies of the autopatch codes to paid members.

FCC testing will be on Saturday, June 5, at 9 a.m. in Room A-107 in the UWSP Science Building. Doors will be open at 8 a.m. for setup.

Joe, N9CGV, reported that he received a renewal notice from *Worldradio* for the advertisement of our monthly meetings. After some discussion, Art, N9BCA, moved that we not renew the ad. Mike Peters, W9CO, seconded. The motion passed. The raffle license was received in the mail and Al Mallek, N9WBS, will have 2000 tickets printed in May. There will cash prizes this year and the drawing will be September 8, 1999, which is our regular monthly meeting.

The newsletter that Kathy Mallon was doing for the club will be discontinued due to lack of information that was given to Kathy.

Mike, W9CO, sent out letters to several vendors asking them for some open dates they may have open next year where they could attend a swapfest. He will report back to the group as he receives the information.

Art, N9BCA, and Mike, W9CO are co-chairmen for Field Day. It will be held out at Art's again this year and will follow along the lines as last year.

National Tornado Week is the week of April 19, 1999. Thursday, April 22, 1999 has been declared State Amateur Radio Day. Art, N9BCA, will be available to help run the mock net that will take place during a tornado drill from 1 to 2 p.m. Additional people will be needed to help for this net.

Bob, W9NN, said that we could hold our annual August picnic at his house again this year. There is no regular monthly meeting in August so a picnic is held in place of the meeting.

Bob Baird, W9NN, moved to adjourn, Art Wysocki, N9BCA, seconded, the motion passed and the meeting adjourned at 8:27 p.m.

The next meeting will be May 12, 1999 in Room A-107 at the UWSP Science Building.

Respectfully Submitted, Mary Eiden,
KG9OK, CWRA Secretary

ATTENDANCE

| | |
|---------------|--------|
| Mary Eiden | KG9OK |
| Al Mallek | K9WVM |
| Jan Rydberg | KB9RUJ |
| Mike Eiden | N9MI |
| Art Wysocki | N9BCA |
| Ron Howe | NJ9H |
| Bob Baird | W9NN |
| Al Mallek | W9WBS |
| Mike Peters | W9CO |
| Joe Omernik | N9CGV |
| Jerry Fadness | W9GF |
| David Tamres | KB9IIF |

RED CEDAR REPEATER ASSOCIATION, INC.

STEVE HART, KA9OMC, SECRETARY

E616 810TH AVENUE

KNAPP, WI 54749

2-Meter Repeater: 146.01 Input/146.61 Output

Greetings, RCRA sponsors and guests.

Welcome to new licensed amateurs KB9UIK, Yavonne Garnett, and KB9ULF, John Wagner. Yavonne took her exam at Eau Claire and John tested at Menomonie.

NX9F, Jim Ley, reports that about twelve exams were given at the Menomonie VEC. There were about nine who went away with something.

K9IAG, Ken Drake at Menomonie, is looking for a small pouch to put a cell phone in for the car. Ideas, call (715) 235-3104.

Our club spring thrift sale of household items will be held May 8 at the residence of KB9NIR, Scott Kilde, at Cedar Falls. If you have items to donate and cannot bring them to the day of the sale, contact KA9OMC, Steve Hart, at (715) 665-2374 to arrange for pickup. Items not reclaimed at the end of the day will become property of RCRA. Scott's address is E5501 County Road BB. Thank you for your donations.

NQ9X, Ed Van Sickle (RCRA Director), reports that the 146.94 MHz repeater at Hixton Hill will have nets on Wednesday nights at 6:30 p.m., with net control Burch, KB9RBN. Ed also has two color printers for sale. (715) 694-2101.

N9LRV, Gerald Leff, reports daughter Amy has a new baby girl.

N0PDD, Bob Stark, attended both Rochester and Blaine hamfests. Bob recently had problems with deer bothering his rotor cable and plans on burying it with the nice weather.

N9PPE, Jeff Cole, has a TS-830S for sale at \$450 and a Yaesu FT-736R with tone board installed for \$1100.00. (715) 568-1011.

Sorry to hear that K9EN, Ken Ebner, will undergo shoulder surgery. Speedy recovery, Ken, as BSSS needs you as well.

KB9LUK, James Kinney, is looking for the PK-88 program. (715) 283-4373.

K9KGB, Bill Duncan, expects to capture the Eau Claire Cavaliers in action on his new videocam. "Play Ball!!!!"

KB9SGY, David Garnett, attended the expanded Skywarn training in Eau Claire. Beside studying Morse code on Thursday nights on the repeater, Dave checks in with the Tri-County 145.47 MHz net at 8 p.m.

KB9TAC, Andy Wagner, at Eau Claire, recently attended both the Eau Claire Skywarn and Menomonie training sessions.

N9RSU, Leroy Dick at Eau Claire, reports daughter Andrea is studying for her Technician class.

The RCRA is in need of net controls for the Monday night net for everyday crisis situations like Skywarn. If you think you may have interest in net controlling, just show up a little early before the Monday net and get briefed on the details.

Join the gang for Saturday coffee at Hardee's in North Menomonie at 9 a.m.

*Steve Hart, KA9OMC
RCRA Secretary/Treasurer*

This certifies that....



Wisconsin's new ARRL Section Traffic Manager is a long-time traffic handler and a former mayor (New Holstein), Denny Rybicki, K9LGU, at left. He is being certificated by outgoing Section Manager Roy Pedersen, K9FHI.

New official takes place in the Wisconsin Amateur Radio scene: Stan's the Man

Al Wohlford of the Wisconsin Department of Emergency Management in Madison has announced the appointment of Stan Kaplan, WB9RQR, as state Radio Emergency Civil Emergency Service (RACES) officer. Stan took office on May 1, 1999. He takes the place of Bill Kimble, WA9OAY, of Watertown. Thanks are extended to Bill for his dedicated service.

Info from Mack Brophy, N9NTB

Please take a few minutes to thank all the volunteer writers and photographers who contribute their work to BSSS. They, like the staff, are paid the same. If our pay doubled, it wouldn't change. They appreciate your thanks and encouragement. Thank YOU!

Pedersens get the gold

Mr. and Mrs. Roy A. Pedersen, 510 Park St., Juneau, will celebrate their 50th Wedding Anniversary on Sunday, June 6 at the Juneau Community Center.

The couple were married June 9, 1949 at the Randolph Methodist Church by the Rev. Noah Bess, Pastor.

Roy was born at Arkdale, son of Hand and Hilda Pedersen. Beryl was born at Randolph, daughter of Gerald and Ruth Stone.

They have made their home at Juneau. Roy has retired from Universal Foods, Inc., but has been employed at the same plant with seven different employers as an electrician. Beryl has worked the Lutheran Hospital and in the offices of Dr. W.H. Costello and Dr. C.L. Qualls at Beaver Dam, and at the Dodge County Register of Deeds at Juneau.

They are the parents of two sons, Gary and Michael. Gary works at Allen Bradley as a lab technician in Milwaukee, and Michael is a CAD specialist at Maysteel in Mayville.

The family are Amateur Radio operators, Roy being Section Manager of ARRL's Wisconsin Section for many years. They are members of the Juneau United Methodist Church.

Friends and relatives are invited to help them observe this occasion at the Juneau Community Center on Sunday, June 6 from 2 to 5 p.m. No invitations are being sent. No gifts, please.



1949



1999

Taylor County Area Amateur Radio Club

Continued from page 11

place to enable such a link from the repeater, so it is being accomplished from a site other than the repeater location. The officers and membership of the Taylor County Area Amateur Radio Club feel that these actions are inappropriate and should cease. We are requesting the assistance of the area Amateur Radio community, particularly hams in the Wausau area, in helping us track down the individual(s) responsible for this unnecessary and annoying linking.

CLARK/TAYLOR COUNTY AMATEUR RADIO EMERGENCY SERVICE (ARES) NEWS

**Mike Schoenfuss, N9GHZ
ARES Emergency Coordinator**

Don't forget to try to check into the weekly ARES net held Wednesdays at 8:30 p.m. on the Medford repeater (147.75/147.15). If the repeater is down or not functioning properly, alternate frequencies, in order, are 147.15 MHz simplex and 146.52 MHz simplex. You're also encouraged to volunteer for net control duty for the net.

IMPORTANT UPCOMING DATES

Please mark your calendars for these dates and try to participate if you possibly can:

✓ 5/20/99 - Open house at the National Weather Service office in La Crosse, 2 p.m. to 7 p.m. The office is located at N2788 County Road FA, at the top of Granddad Bluff.

BSSS Club/Group Rate Subscription Plans

Badger State Smoke Signals offers discounted subscription rates to clubs and groups, based on the number of subscribers. The cost can be several dollars less per year per subscriber than the regular individual rate if as few as just ten members of a club or group subscribe. To learn more, write or mail/email Ken Ebner, K9EN, 822 Wauona Trail, Portage, WI 53901, kebner@palacenet.net or Jim Romelfanger, K9ZZ, 412½ Ash Street, Baraboo, WI 53913-2501, smokesigs@baraboo.com.



THE WISCONSIN PACKETEER

Wisconsin Amateur Packet Radio Association
Allen Schnepf, NØGMJ, Treasurer
Ogema, WI 54459

Andy Nemec, KB9ALN, Editor • 453 Cottage Grove Avenue • Green Bay, WI 54304 • e-mail: kb9aln@juno.com

WAPR News - May, 1999

Hello everyone, and welcome to May.

In the news this month is the proposed node for the Milwaukee area. As you may recall from last month, I had announced that there is a possibility of a new network node making it's home in Milwaukee. I solicited comments about this, and received exactly two responses. I was happy to get the responses, but hoped for more.

One was from Dick Adduci (whose call escapes me at the moment) in Milwaukee. He has been away from packet for a year or so, and was quite surprised to see the drastic change in the Milwaukee packet "radioscape" since he last was on. He is looking forward to this possibility very much, and hopes that the node will become a reality.

The other response was from Jeff, N9NQW, near Wausau. He has friends in the Milwaukee area and can occasionally make a shaky connection to the town of the Brewers via KA-Nodes on 145.030. He would very much like to see a node in Milwaukee that he can access via the network. He is, of course, all for the idea.

However, two responses, no matter how enthusiastic, are not going to make this happen. So, if the good people of Milwaukee do indeed want to see this happen, I urge you to let me know, so I can relay your responses to the people involved, and perhaps, see this to fruition.

Last month, I mentioned a coming Spring WAPR meeting. We had hoped to get this all arranged in time for the Madison Swapfest, but this did not come to pass. We are in the process of changing treasurers, and the delay has prevented us from getting all of the records together for presentation to the membership. When we do get this all squared away, we will put an announcement on the BBS network to let everyone know when, where, and any other pertinent details. Do stay tuned.

And that is all for this month. Until next time, 73 from Andy. □

Sending Binary Files via Packet Radio

By Andy Nemec, KB9ALN

Most packet radio activity is based on messaging and conversation - text modes. There are a lot of operators out there who mistakenly believe that you can't send binary files via packet radio, or think it is not worth the trouble to do so. While some file transfer methods involve using arcane TNC commands, there are pro-

grams that can perform this task, and some are better than others. That's what we will discuss this time out - a simple, practical way to send binary files without a lot of trouble. A bonus is that a lot of stations (most notable TCP/IP BBSs and other hosts) have the capability to send and receive binary files with one of the programs that we will discuss in-depth.

What's a Binary File?

That's a good place to start. A Binary file is any file that is not based in text. That includes executable programs, bitmap and GIF files, Data files, and anything that can't be sent as a text file.

Why Would You Want To Do This?

Ever make up a bitmap file of your QSL Card? Have you ever run across a neat little utility that you wanted to share with a packet friend, and it was impractical to run it over to him or her? Sending it via packet is often the most convenient way to do it. Especially if E-Mail is unavailable to one of the people involved in the program exchange.

How Does It Work?

There are, as I said earlier, two ways to do this. One involves a few TNC commands that are inconvenient to use. The other method is to use a program to do the work for you. These programs convert the binary file to a text file so that the receiving station can handle it conventionally, without the need to manipulate the way your TNC receives data. Binary information is converted to a special set of text and control characters, and converted back to binary information by the receiving station.

There are several programs that one can use to do this. One method that you may have seen on the packet BBSs is 7Plus. This is widely used in Europe, but does not seem to be too popular here in the U.S. It allows you to split the binary file into parts, making for easier sending. Your TNC and computer are "fooled" into thinking that the file is standard text, so none of the usual gyrations one may have to endure with other methods are required.

Another program is called "YAPP". This is purported to mean "Yet Another Packet Program". It is widely implemented in the MSYS BBSs. While it is possible to use, there are some designed-in limitations to

this program, and I am told that it has a fundamental flaw that may cause transmission errors with some files.

The easiest way to send executable programs by packet (that I know of) is to use a neat little package of programs called UU Encode/Decode. This is a pretty common package that is freely available on the internet, and even on some shareware CDs. There are two programs in the package. UU Encode turns the Binary file into a text file. After the file is received and stored on your computer, UU Decode takes over and converts the file back to it's native binary format, ready to use just like any other binary file.

UU Encode/Decode also allows you to split a binary file into pieces, just as 7Plus does. This is awfully handy when you have a poor packet radio path to your destination station. It also is very commonly implemented on the Internet. It was the method of choice before E-Mail attachments were commonplace.

How Do You Do It?

This is the really nice part of UUE - it is easy. The program runs in DOS (or a DOS window), and I have used it on DOS 3.3, as well as DOS 6.22. I have run it on an 8088 as well as a 486, so if you are using an older model computer for packet, you won't be left in the dust. It is command-line driven. Let's say we have a file called "MAPPO.EXE" that we'd like to send to a friend via packet. To encode a file for transmission, we would enter this command at the DOS prompt (you will have to use the correct path, of course):

UUENCODE MAPPO.EXE

In a few moments, the program will tell you that the file has been converted, with a name of "MAPPO.UUE". The original file is left intact. You will notice that the "MAPPO.UUE" file is larger than the original. This is normal, and only to be expected. UUE adds information on file size and gives a checksum, which increases the size of the file. The conversion process also expands the size of the file because of the method of conversion that is used. Converting a 25K file will increase its size to 35K.

When sending the file, all you have to do is perform a standard file upload, just as though you were uploading a text file to a BBS or to a friend's packet station.

On the receiving end, a capture file is opened and saved to disk. When the file is received in full, the capture file is closed. The receiving station exits the packet program (or "shell's out", if enough memory is available for this purpose), and runs the UUDECODE program. This command resembles (once again, the path on your computer will be part of the command):

UUDECODE MAPPO.UUE

And the original binary file checked for errors and restored to its original state, if there are not transmission errors. If there is an error, the program will not be converted and you will be notified of this.

Conclusion:

UUEncode/Decode is one of the easiest methods I have seen to send binary files when you seem to be limited to "text-only". It also works on the "FreE-Mail" services on the internet that limit you to this "text-only" mode. And it also is widely supported on TCP/IP amateur stations, so you can download programs from these stations, too.

You can obtain UUE on the internet from a multitude of internet sites. Go to your favorite search engine and enter "UUE", and you will doubtless find a site for a DOS implementation of this pair of programs. Linux users also can find it out there, if you don't have it already. sunsite.unc.edu is the first place for Linux users to check. If you don't have internet access, send a note to me and I will gladly send you a copy of the program.

No matter what operating system you use, UUE is an easy and practical method to send binary files via packet. Of course, it is always good to take into consideration other traffic on your LAN before you engage in a lengthy file transfer session of any kind. But once you use it, you will wonder why others aren't using it - it's so easy!

That's all we have space for this time out. Until next time, 73 from Andy. □

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Allen Schnepf, NØGMJ, Treasurer
W5000 SR 86, P.O. Box 558 • Ogema, WI 54459-0558

Minnesota Test Information

From The Ground Wave, Saint Paul Radio Club

Saint Paul Radio Club (SPRC)

Contact: Ed VanCleave, W0VC, (612) 636-0108

Test Site: St. Paul Technical College

235 Marshall Ave.

St Paul, MN

TESTING: First Saturday of the month, 8:30 a.m.

Anoka Amateur Radio Club (AARC)

Contact: Craig Johnson, AA0ZZ (612) 483-3143

Test Site: Blaine City Hall

9150 Central Ave NE

Blaine, MN

TESTING: Second Saturday of the month, 9:00 a.m.

Bloomington Office of Emergency Management

(Bloomington Amateur Radio Club (BARC))

Contact: Dan Royer, KE0OR (612) 888-9756

Test Site: Fire Station No. 1

94th St. & Nicollet Avenue S.

Bloomington, MN

TESTING: Fourth Saturday of the month, 9:00 a.m.

Valley Amateur Radio Club (VARC)

Contact: Bill Martin, AI0D (612) 432-0438

Test Site: Hayes Community Center

14601 Hayes Road

Apple Valley, MN

TESTING: Second Thursday of the month 7:00 p.m.

W5YI Group

Contact: Dave Ranney, N0AXL (612) 542-2553

Test Site: Eden Prairie Library

479 Eden Prairie Drive

Eden Prairie, MN

TESTING: Third Tuesday of the month 6:30 p.m.

SE Metro Area Radio Club (SEMARC)

Contact: Dave Harrell, K0BTE (612) 459-8678

Test Site: Cottage Grove fire Station

8641 80th St., S

Cottage Grove, MN

TESTING: Third Saturday of the month, 9:00 a.m.

The times and places listed above are the usual time and place for each VE team. Occasionally, sessions are canceled or changed. It is a good idea to call ahead to confirm the test time and place.

This section of *Badger State Smoke Signals* is available to publicize your Volunteer Examiner Amateur Radio license examination schedules. Please send us your schedules of dates, times, and locations that you will be conducting examinations and we will include the information here. Be sure to include contact address and any other necessary requirements. Information should be sent to K9EN at the address shown on page 2. □



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FOR SALE: Hallicrafters HT-37 tube-type transmitter - good cond. 100.00 Realistic HTX-100 10M transceiver - like new with mobile bracket, mic, and mobile antenna. \$75.00. Hand-held 1M (old) with charger. \$10.00. Dave Guilliom, Wausau WI (715) 842 0728.

FOR SALE: Colorful United States Stamps. 100 all different. \$1.00 postpaid. Richard Regent, K9GDF, 5003 South 26th St., Milwaukee, WI 53221. □

Yellow Thunder Amateur Radio Club



WB9FDZ (Original Club Call)
K9ODK (Robert L. Prine Memorial Call)

Raymond J. Matlosz, N9MLZ, Secretary
450 West 2nd Street • Reedsburg, WI 53959



The April 6, 1999 meeting of the Yellow Thunder Amateur Radio Club, Inc., was called to order at 7:40 p.m. by Steve Schulze, N9UDO.

Minutes for the March 2, 1999 meeting was approved with the following correction: Art Kleefisch's call sign is W9WSS.

Financial report was accepted.

OLD BUSINESS

(1) Fox Hunt, with prize, will be May 4th at 6:30 p.m. beginning in the parking lot of the Baraboo Civic Center.

(2) MARA SWAPFEST: Sunday April 11, 1999 with club and BATS having a table.

(3) No word on the status of the sale of the club generator.

(4) Field Day will be held in the usual place in June featuring the cooking of N9UDO's wife.

(5) Update on status of a club having a repeater.

NEW BUSINESS

(1) Bill Hommel KA9QFJ wondered if the club was interesting in purchasing a GPS for club use.

(2) Club will not be participating in YODA this year.

(3) Pete Sweeney, WD9JIB, updated the club on

Sauk County Emergency Government, including plans for New Year's eve.

BUCK NIGHT WINNER: Thomas Harrison, N9-PQJ, who graciously donated his winnings to the Field Day Food and Beverage Fund. Thanks, Tom.

Meeting adjourned at 8:24 p.m.

NEXT MEETING AND FOX HUNT: Tuesday May 4, 1999 at 6:30 p.m. at the Baraboo Civic Center (parking lot and then room 14).

The following members and guest were present:

| | |
|------------------------|---------------|
| Jim Brann, KB9NXG | North Freedom |
| Raymond Matlosz, N9MLZ | Reedsburg |
| David Estes, KB9QDE | Reedsburg |
| Steve Schulze, N9UDO | Baraboo |
| Leonard Wagner, N9XJG | Baraboo |
| Peter Sweeney, WD9JIB | Reedsburg |
| Thomas Harrison, N9PQJ | Reedsburg |
| Bill Hommel, KA9QFJ | Baraboo |
| Jim Paul, N9LKY | Baraboo |
| Art Kleefisch, W9WSS | Baraboo |
| Bill Klinkner, N9KXX | Sauk City |
| Anne Klinkner, N9PQL | Sauk City |
| Patrick Klinkner | Sauk City |

APRS Web Sites

We hope you are reading the series about the Automatic Position Reporting System we are printing, written monthly by Tom Weedon, WJ9H. It's actually much more than its name indicates. Here are two Web sites you can visit to get a little more "hands-on" info before you plunge into APRS. The first is: <http://www.execpc.com/~N9UUR> and the second is <http://n9uur.imc.mu.edu/CALLSIGN>, where callsign is the call of the station you're seeking. A working example would be using WJ9H or N9UDO. The second URL works with either Netscape or IExplorer.

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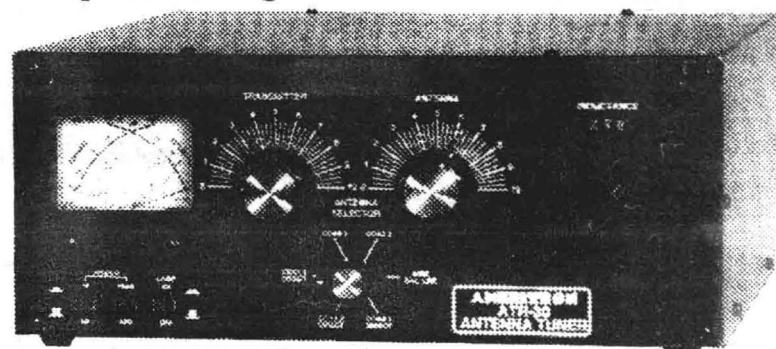
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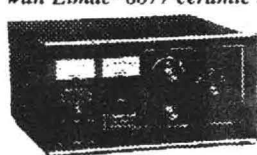
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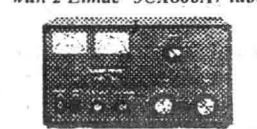
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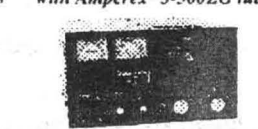
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Red Cedar Repeater Association, Inc.

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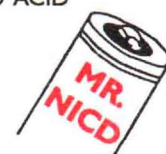
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